8/22/22 Morning Report with @CPSolvers

Case Presenter: *Mohit Harsh (@MohitHarshMD)* ***Case Discussants***: *Gurpreet Dhaliwal(@Gurpreet2015)*

CC: Altered mental status

HPI: 76 M admitted for Tx of ongoing ear infection
Dx of left acute otitis externa over last 2 months
Seen by PCP and ENT specialists, received multiple Ab Tx (augmentin, ciprofloxacin p.o. + eardrops) and debridements (4x)
Not improving, still draining purulent material and ongoing pain -> admitted for i.v. Cefepime and ID consultation
On day 3 AMS, less alert and drowsy

PMH: HFrEF (EF 35%), prior stroke w/ residual L sided hemiparesis, hypothyroidism, severe COPD, uncontrolled DM (A1C 9), OSA (CPAP nightly)

Meds:
Basal bolus insulin, aspirin, mirtazapin, inhalers, gabapentin, lisinopril, carvedilol, levothyroxine

Fam Hx: strokes father, CAD, DM mother
Ø previous surgery

Soc Hx: St. Louis area, Vietnam veteran, retired (worked as carpenter)

Health-Related Behaviors: ødrugs, active smoker (1-2 packs/day), quit drinking in 90s

Allergies: none

Vitals: **T**: **38.1** **HR**: 76 **BP**: 130/70 **RR**: 12 **SpO_2**: well on RA
Exam:
Gen: overweight, not ill appearing
HEENT: marked pain L ear, draining purulent material, otoscope could not be inserted, R ear, nose and oropharynx without abnormalities
CV: no JVD, r/r/r, no murmurs, rubs or gallops
Pulm: clear to auscultation bilaterally
Abd: non-tender, non-distended, no ascites, no hepatosplenomegaly
Neuro: CN intact, L residually weak (⅘), AOx0, drowsy, sleeps throughout exam, does not respond (echolalia), intermittent jerking of LEs and flexing of chest muscles
Extremities/Skin: no rash, spider angiomas, slight L posterior LAD

Notable Labs & Imaging:
Hematology:
WBC: 8 (normal diff) Hgb: 14 Plt: 250

Chemistry:
Na: 141 K: 4.3 Cl: 106 CO2: 24 BUN: 12 Cr: 1.3 (baseline 1.1) glucose: 90
LFTs unremarkable
vBG: no hypercarbia
BCs: no growth after 3 days
Imaging:
CT head/temporal bones w/ contrast: global cerebral atrophy, old stroke, L ear canal erosions, no clear mastoiditis or abscess
D3: more somnolent
D4: myoclonus was noticed -> off cefepime and held ab for 24h
D5: gradually improving, less myoclonus, still somnolent, ID to zosyn
D6: up in bed asking for breakfast -> **Dx: cefepime induced neurotoxicity**
Further Hx: poorly compliant with antibiotics and never finished Ab course, only got debridements; chronic erosions -> **osteomyelitis of ear bones**

Problem Representation: 76yoM with multiple comorbidities p/w worsening acute otitis externa followed by AMS. On PE, febrile and with L ear pain a/w draining purulent material.

Teaching Points (Kiara):
AMS → MIST (Metabolic, Infection, Structural, Toxins)

Ear disease w/o improvement: Wrong bug, wrong drug, source control issue (Check immune system, malnutrition, drugs). Check if the original diagnosis is correct.

Infection spread: Mastoid, temporal bone (malignant otitis externa in diabetes), brain (encephalopathy, meningitis, septic thrombophlebitis, abscess, VST)

Back to AMS: Glucose level, SpO2, Drugs associated encephalopathy (B lactams, Quinolones, Metronidazol), AKI (Gabapentin induced).

Infection vs Cancer: St Louis (Ehrlichiosis, Blasto) vs occupational exposure.

How to make progress? Ear exam, neuro exam (neck and CN).
- Ear + CN involvement = Cranial compromise

Erosion = Destruction (Cancer, infections- Fungi, Autoimmune).
- *Workup*: Infection (cultures, viral serology, mycobacterial/fungi tests, have a high hypothesis for parasite workup) → Cancer (Imx, bx) → Autoimmune (ANCA)