



8/20/24 Morning Report with @CPSolvers



"One life, so many dreams" Case Presenter: Sheri Walls (@) Case Discussants: Ravi (@) and Mengyu (@)

CC: 25yo female p/w **left throbbing ear pain** w/ yellow and **purulent discharge** and fever

HPI: presented prior w/ similar symptoms , was given **steroids and Augmentin** with **no improvement**, 2 days of fever as high as 101 F, 10/10 periorbital headaches and neck pain. No prior ear/sinus infections, denies any prior trauma and refers adherence to her medications.

Started broad spectrum antibiotics, underwent **surgical debridement** w/ mastoidectomy, the pain improved, **post-op:** progressive swollen area over wound which was evacuated, the patient was brought to the OR **w/ active arterial bleeding**

Presented again **w/diplopia**, mild **ptosis**, was managed as thrombotic complication > stroke

Vitals: T: 98-101 HR: 103 BP: 90/72 RR: 16, sats 100 on RA

Exam:

Gen: uncomfortable

HEENT: PERRLA, atraumatic, **tragus pain**, **pain** located **inside** the ear canal, **pain over the mastoid**, **yellow ear-discharge**, no trauma. Oral cavity: no abnormalities

CV: nl

Pulm: nl

Abd: nl

Neuro: no facial droop

Extremities/skin: no rashes

Notable Labs & Imaging:

Hematology:

WBC: 19 **Neutrophils** 87% **Hb** 12 **MCV** 81 **Plt:** 406

Chemistry:

Na: 141 **K:** 3,9, **HCO3:** 31 **Anion gap** 13 **Cr** 0.6 **BUN:** 14 **Lak.** 1.1, **CRP** 2.57

Imaging:

CT head: near complete **opacification** of left mastoid, middle ear cavity 2/2 mastoiditis

Blood cultures: negative

Wound cultures: **Moraxella Catarrhalis (+)**

MRI head: **Small venous thrombosis** in the left mastoid

The patient had C12 irritation, she continued with a course of antibiotics, she was also started on a low-intensity heparin drip through shared decision making. She followed up with physical therapy.

Dx: **Venous Sinus Thrombosis**

Problem Representation: 25 yo F w/PMH of neuromyelitis optica p/w left throbbing ear pain w/ purulent discharge and neutrophilic lymphocytosis complicated by double vision and proptosis after surgical intervention

Teaching Points (Vinicius):

- Anatomical approach: external ear, internal vs external canal (dissemination involving middle ear and bones?). Deep tissue infection. Structural issues, malignancy, osteomyelitis, cholesteatoma.
- Ear-Eye syndrome spectrum.
- What are the risk factor and the immune status of the patient?
- Irradiating to the ear or primarily in the ear?
- Primary vs Secondary causes: 1- otalgia, media vs externa (pseudomonas). Secondary: outside of the ear. Cranial nerve disorders, ATM, cervical spinal stenosis, thyroiditis, vascular issues, Ramsay Hunt syndrome.
- Pain pattern: continuous or intermittent. Hx of trauma. Ear discharge.
- PE: visual eval, otoscope (tympanic membrane, cerumen impaction, inflammatory signals), oral exam, abscess, ulcers, palpate TM joints, evaluate cranial nerves, vesicles suggesting zoster eruptions. Hearing loss, ptosis, nasal and sinus exam, prim inflammatory issue or infection.
- Less common: Leukemia, inflammation, vasculitis (GCA, GPA, Behçet), parotitis, sarcoidosis, polychondritis, autoimmune disorders.
- Imaging: CT - visualization of bone, venous sinus thrombosis or brain infiltration. MRI - jugular venous sheath -> Lemierre's.
- Surgical intervention need? Correlates w/ dissemination -> blood vs lymphatics vs continuous. All leading to sepsis. Mastoiditis should be ruled out -> surgical debridement.
- NMO as a distinct entity or consequence. Is that a flair?
- pre test probability-> infection -> initiate ATBs. No response to initial ATB, escalate them, do not delay. Cover (MRSA, pseudom. Vanco + cefepime or Zosyn (emerging resistance) + anaerobes (DM relation). If neutropenia or no response -> fungal.
- Risk and Benefits of Thrombectomy

PMH: neuromyelitis optica

Fam Hx: (-)

Soc Hx: (-)

Health-Related Behaviors:

no smoking, **no alcohol**

Allergies: no

Meds: **Rituximab** 6 month prior, **Augmentin** , **Steroids** (Prednisone taper) 20mg over a week