2/08/22 Neuro Morning Report with @CPSolvers

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CC: Seizure

HPI: 23yF p to ED w/ a new onset (1d before) of following symptoms: suddenly starts to stare and stops what she is doing (behavioral arrest), deviation of the eye, tonic movements of whole body with a duration of 2-3minutes. During the episodes she loses consciousness. She has had 3 episodes followed by confusion, somnolence, profound breathing for 2 hours. No loss of sphincter control, tongue biting, or major trauma during the episode.

Today she called ambulance and was given IV diazepam.

PMH:
Sickle cell disease (blood transfusions every 2w). Over 20 hospitalization for pain crisis and acute chest syndrome
Previous chole
PDA - successfully operated at 8y
No febrile seizures.

Meds:
Folic acid, ASA
Hydroxyurea
Gabapentin

Fam Hx:No relatives w/epilepsy. Sister has SCD and had stroke at 4yo.

Soc Hx:None, lives in Brazil

Health-Related Behaviors: none

Allergies:None.

Vitals: **T**: normal **HR**:80 **BP**:120/90 **RR**:14 **SpO_2**:95%
Exam:
Systemic:
Neuro - Normal.
- **Mental Status:** AOx3
- **Cranial Nerves:** Fundoscopy: Normal.
- **Motor:** normal
- **Reflexes:** 2+/4+
- **Sensory:** normal
- **Cerebellar:** normal

Notable Labs & Imaging:
Chemistry/Hematology:
Fingerstick glucose: normal.
CBC - anemia
HIV/Syphilis/hepatitis negative
CMP - normal
Urea/creatinine: normal

Imaging:
Brain MRI: isolated ring-enhanced lesion in the frontal gyrus in the right, with surrounding vasogenic edema. Size: 1,8x1,6x1,4cm. Vessel imaging: normal.
CSF: syphilis, HIV, India's ink negative. Negative for meningococcal. 3 leukocytes, protein 23, RBC 0.
Brain biopsy: chronic granulomatous inflammation with caseous necrosis. Acid fasting stain positive.

She was treated with rifampicin, ethambutol, levofloxacin and streptomycine for 10 months and carbamazepine for seizure prophylaxis. Repeat CT scan after the treatment was normal.

Final Diagnosis: neurotuberculosis

Problem Representation: 23yF w/PMHx of SCD p/w new onset seizures for the past day.

Teaching Points (Gabi/Vale/Maria): #EndNeurophobia

- **Seizures**
  - **Was it a seizure?** Mimickers - syncope; psychogenic non epilleptic seizure (FND); TIA.
    - Although loss of sphincter control and tongue biting can indicate seizures. Their absence doesn't rule them out.
  - **Was it provoked or unprovoked?:** Provoked seizures have acute and reversible causes. **Possibly provoked causes (MIST):** Metabolic (electrolytes, hypoglycemia), Infections (meningitis/encephalitis), Structure (space occupying; brain tumors or scars are unprovoked as they are chronic and non reversible), Toxins.
    - Provoked seizures don't need chronic anti-seizure meds.
  - **What was the pattern** (generalized vs partial; w/ or w/out loss of consciousness).
  - **Eye deviation:** During seizure (irritative) - eyes turn contralateral to lesion; Postictal or stroke - eyes turn ipsilateral to lesion.
- **Status Epilepticus:** Seizure lasting >5m (older def: >30m), multiple seizures w/out return to consciousness between them. It can also be NON epileptic status.
- **Sickle cell disease - Neurology Venn Diagram**: stroke (¼ will have a stroke by age 45). Is there a relationship btwn stroke and seizure? Possibilities:
  - -Hemorrhagic stroke → brain irritation → seizure.
  - -Ischemic stroke → scarring → epileptogenic foci.
  - -Seizure w/ post-ictal Todd's paralysis → mimicker of stroke

Absence of fever does not rule out the possibility of bacterial abscess.