11/3/20 Morning Report with @CPSolvers

Case Presenter: *Travis Smith + Dhruv Srinivasachar (@RosenelliEM + @TheRealDSrini)* ***Case Discussants***: *Tahir Malik (@TahirM95) and Kiara Camacho (@KiaraCamacho96)*

CC: Abrupt onset right arm and right leg weakness and numbness

HPI: 36 Woman, p/w R. arm and leg numbness and weakness 1hr after waking up this morning and taking cyclobenzaprine for neck pain. Walks -- falling to R. side. Sx started 6 hrs prior to arrival at ED.

No vision changes, speaking, swallowing, nausea, headache, vomiting

2 months - recurrent atraumatic b/l post neck pain. PCP Tx naproxen and cyclobenzaprine. Meds relieve pain. No neck pain currently.
Visited chiropractor frequently for neck pain, Tx neck cracking

PMH: No PMH, SHx

Meds:
Naproxen,
Cyclobenzaprine
No OCPs,

Fam Hx: Nothing significant

Soc Hx: Employed as a security guard and works night shift

Health-Related Behaviors: No alcohol, drug, tobacco use.

Allergies: None

Vitals: **T**: N **HR**: N **BP**: 118/78 **RR**: N **SpO_2**: N
Exam:
Gen: Well appearing
Neuro:
CN: 2-12: slight tongue deviation to left;
Motor: Strength: R- 4/ 5 upper and lower,
Sensory: Diminished over Right arm and leg
Cerebellar signs: Normal

Extremities/Skin: Normal

Notable Labs & Imaging:
Hematology: Normal

Chemistry: Normal

Imaging:
CT head: Normal
MRI - restricted diffusion Left medial medulla,
CT angio head and neck - Head -- N; Neck - luminal narrowing and stenosis in prox R vertebral V1 segment

Dx: Medial medullary syndrome/ Dejerine syndrome secondary to right Vertebral A dissection

Problem Representation: A middle aged woman with subacute neck pain and abrupt onset right sided hemiplegia and hemiparesthesia.

Teaching Points (Maria): #EndNeurophobia

- **E=MC2 (DDx = Localization x Time Course)**
  - Localization (hemibody): precentral gyrus → corona radiata + internal capsule → anterior brainstem → cervicomedullary junction CROSSOVER → lower motor neuron. Could be ipsilateral spinal cord, contralateral brain.
  - Brain vs spine: Weakness: UMN (brain + spine) vs LMN; Brain: anything above the neck - mental status, cortical functions (speech,apraxia), cranial nerves. Central lesions very proportionate but exaggerated affection of hand.
  - Brainstem: **Medial medullary syndrome** (vertebral and anterior spinal artery):Ipsilateral cranial nerve affection and contralateral body affection. 12CN/4: Midbrain: 1- 4; Pons 5-8; Medulla 9-12
  - Sudden onset: vascular, toxins, seizures (postictal, Todd's paralysis), migraine (even w/out headaches)
  - Subacute: expanding mass, abscess.
- **Associated symptoms**
  - Neck pain: Cervical artery (carotid or vertebral) dissection (neck pain (trauma or no trauma) → stroke-like symptoms in next 24h; young), tension headaches, vertebral conditions.
  - Meds: side effects, masking deficits.
- **Vascular Neurology**
  - CPP = MAP - ICP: To increase perfusion to brain the natural response is to increase MAP (whether for increased ICP or decreased CPP).
  - CT (rule out bleeding)→ Angio. MRI - Diffusion weighted > CT: specificity specially with short evolution time .
  - **Do not crack your necks!!**