



10/16/21 Neuro Morning Report with @CPSolvers



Case Presenter: Rafa Medina (@rafameed) Case Discussants: Valeria Roldan (@valeroldan23)

<p>CC: severe headache and neck pain.</p> <p>HPI: 35-year-old woman comes to the ED with severe headache and neck pain following a motor vehicle collision. She has no dizziness, blurry vision, double vision, slurred speech, numbness or weakness. Neuroimaging was unremarkable with the exception of a right transverse foramina fracture at the level of C2. The patient was placed in a cervical collar and admitted to the hospital. However, on further examination the patient suddenly develops some complications.</p>	<p>Vitals: T: 37 HR: 87 BP: 150x90 mmHg</p> <p>RR: 13 irpm SpO₂:</p> <p>Exam:</p> <p>Neuro: dizziness</p> <p>- Mental Status:</p> <p>- Cranial Nerves: right-sided facial loss of pain and temperature and hoarseness. Partial ptosis and miosis of the right eye and nystagmus. Hearing intact bilaterally</p> <p>- Motor/reflexes: information not available</p> <p>- Sensory: decreased pain and temperature in the left side of the body</p> <p>- Cerebellar: ataxia with past pointing with the right-hand on finger to nose testing</p>	<p>Problem Representation: 35yoF previously healthy presents after a MVC with severe HA, neck pain, and develops suddenly R-sided facial and L-sided loss of pain and temperature, R-sided ataxia and unilateral Horner's syndrome.</p>	
<p>PMH: -</p> <p>Meds: -</p>	<p>Fam Hx: -</p> <p>Soc Hx: -</p> <p>Health-Related Behaviors: -</p> <p>Allergies: -</p>	<p>Notable Labs & Imaging:</p> <p>Imaging: Vascular imaging: acute vertebral artery dissection.</p> <p>Final diagnosis: <u>Lateral medullary syndrome due to stroke secondary to vertebral artery dissection</u></p>	<p>Teaching Points (Maria): #EndNeurophobia</p> <ul style="list-style-type: none"> ● Headache: <u>Classify in primary vs secondary causes + Do not miss red flags:</u> onset (sudden), systemic signs (fever, weight loss), comorbidities (immunosuppression, pregnancy, cancer), characteristics of elevated ICP (worse with Valsalva maneuvers or after lying down "brain orthopnea"). ● Trauma: <ul style="list-style-type: none"> - <u>Bleeding complications</u> - get noncontrast CT to check for: Subdural, epidural, SAH, intraparenchymal hemorrhages. <u>Signs of IC hypertension:</u> Cushing's triad (bradycardia, hypertension, bradipnea) - very severe, patient is herniating or will be herniating soon. RUN! Papilledema may not appear suddenly. - <u>Cervical artery dissection</u> (Carotid or Vertebral) - people might not recall trauma. Pain is very severe with variable characteristics. May cause infarction (false lumen obstructs real lumen; dissection flap is thrombogenic), most commonly in first 24-48 hours but can occur after this time frame as well. - <u>Cervical spine</u> - always use cervical collars! - <u>Osseous</u> (herniation, fractures, listhesis) - <u>Musculoskeletal:</u> most common, other causes must be excluded first. ● How to locate to brainstem? Heavy traffic area of the brain: CN deficits, cross signs (CST have not crossed, DC and ST have crossed, CN are ipsilateral) ● What to do when you're in the brainstem? <ul style="list-style-type: none"> - <u>CN Nuclei: Rule of 4</u> - Midbrain: 1,2,3-4; Pons: 5,6,7,8; Medulla: 9,10,11,12. Exceptions: 1, 11 - don't go to brainstem. CN5 is in all 3 levels. CN8: Pons and Medulla. Motor are Medial. Sensory are Lateral. - <u>Long Tracts:</u> Medial: CST. Lateral: DC, Spinothalamic + Sympathetic. - <u>Cerebellar Peduncles</u> Superior - Midbrain, Middle - Pons, Inferior - Medulla - <u>Diffuse NT projections:</u> locus coeruleus. ● Wallenberg syndrome: Lateral medullary syndrome. Vertebral circulation → PICA. Usually embolic and not thrombotic in origin. Affects CN5 (ipsilateral pain/temp dysf. In face), 8 (vertigo, nystagmus), Nucleus ambiguus (9,10,12) (dysphagia, hoarseness), Spinothalamic tract (CL pain/temp dysf. In body) Inferior cerebellar peduncle (ataxia), Sympathetic fibers (Horner) ● Stroke in young: cervical artery dissection and arrhythmias.