Mystery case!



- Rules:
- 1 Guess allowed, If you guess, you cannot guess again
- Final answer revealed at the end
- Winner will receive one (1) Cafeteria cookie



Patient Information

- Chart review of recent note:
- "Emily" is a 24-year-old female who is a senior in college
- Chief Complaint: headache
- HPI/PMH: Emily has struggled with self ascribed "migraines" for most of her life. She has had several PCP appointments in the last few months for urinary urgency, for which she was treated for a presumed UTI. These treatments have been unsuccessful. PCP orders imaging this time around.

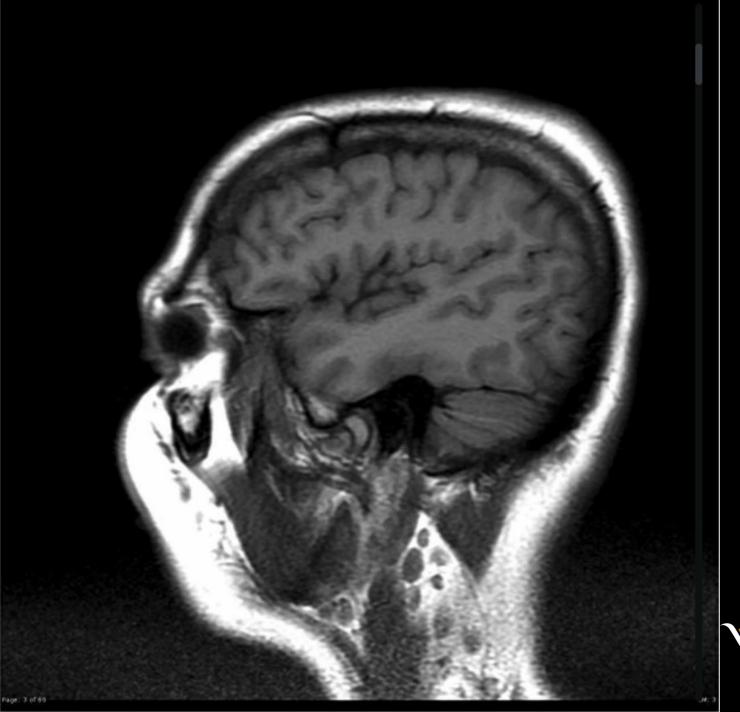




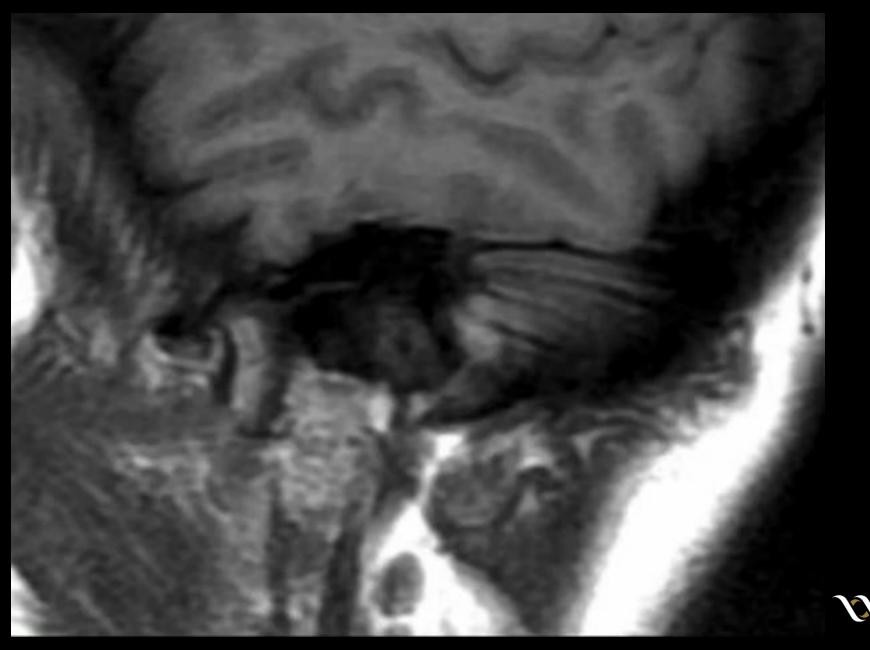














Additional history

- You recheck the PCP's note, and find additional history
- The patient had gotten cut on her upper chest after "bumping into her closet, but never felt the pain...
- When taking a hot bath last week, she noted that "she could not feel the heat on her back and chest"
- She mentions it is hard to read, she feels like "her eyes can't focus"

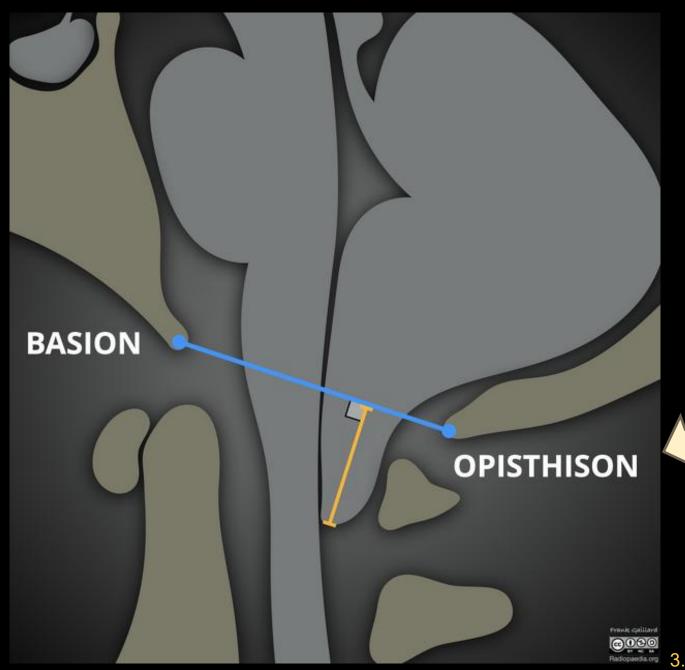








► Wake Forest™ Baptist Health





"Anterior and posterior rim of foramen magnum"



Chiari 1 malformation

- Most common of the Chiari malformations
- cerebellar tonsillar herniation (>5 mm caudal herniation in relation to the foramen magnum
- there may or may not be an associated syrinx
- not associated with neural tube defects 5
- The frequency of obstructive hydrocephalus in patients with Chiari type 1 malformation is generally reported to be approximately 7-8%. ^{6,7}
- Syringomyelia develops in approximately 27-66% of patients with CM1, with the syrinx typically located in the cervical or upper thoracic spinal cord and sometimes extending rostrally or caudally. ^{8,9} Wake Forest™

Baptist Health

References:

- 1. Radiopaedia contributors. (n.d.). Colloid cyst of the third ventricle [Case study]. Radiopaedia. https://radiopaedia.org/cases/colloid-cyst-of-the-third-ventricle-5?lang=us
- <u>2.</u> Radiopaedia contributors. (n.d.). Chiari I malformation with focal syrinx. Radiopaedia. https://radiopaedia.org/cases/chiari-1-malformation-with-focal-syrinx

<u>3.</u>

- 4. Radiopaedia. (2020, February 16). Tuberous sclerosis [Video]. YouTube. https://www.youtube.com/watch?v=pQqGiQ2tdfA
- <u>5.</u> Radiopaedia contributors. (n.d.). Chiari malformations. Radiopaedia. https://radiopaedia.org/articles/chiari-malformations?lang=us
- <u>6.</u> Chiari Malformation Clusters Describe Differing Presence of Concurrent Anomalies Based on Chiari Type. Horn SR, Shepard N, Vasquez-Montes D, et al.

Journal of Clinical Neuroscience: Official Journal of the Neurosurgical Society of Australasia. 2018;58:165-171. doi:10.1016/j.jocn.2018.06.045.

<u>7.</u> 2. Surgical Management of Chiari Malformation Type I in the Pediatric Population: A Single-Center Experience. Venanzi MS, Pavanello M, Pacetti M, et al.

Journal of Clinical Medicine. 2024;13(12):3430. doi:10.3390/jcm13123430.

- 8. Holly, L. T., & Batzdorf, U. (2019). Chiari malformation and syringomyelia. *Journal of Neurosurgery: Spine*, 31(5), 619-628. https://doi.org/10.3171/2019.7.SPINE18113
- 9. Friedlander, R. M. (2024). Congenital and acquired Chiari syndrome. New England Journal of Medicine, 390(23), 2191-2198. https://doi.org/10.1056/NEJMra2308055

