

Anxious? Altered? Agitated? All of the Above?

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Introduction:

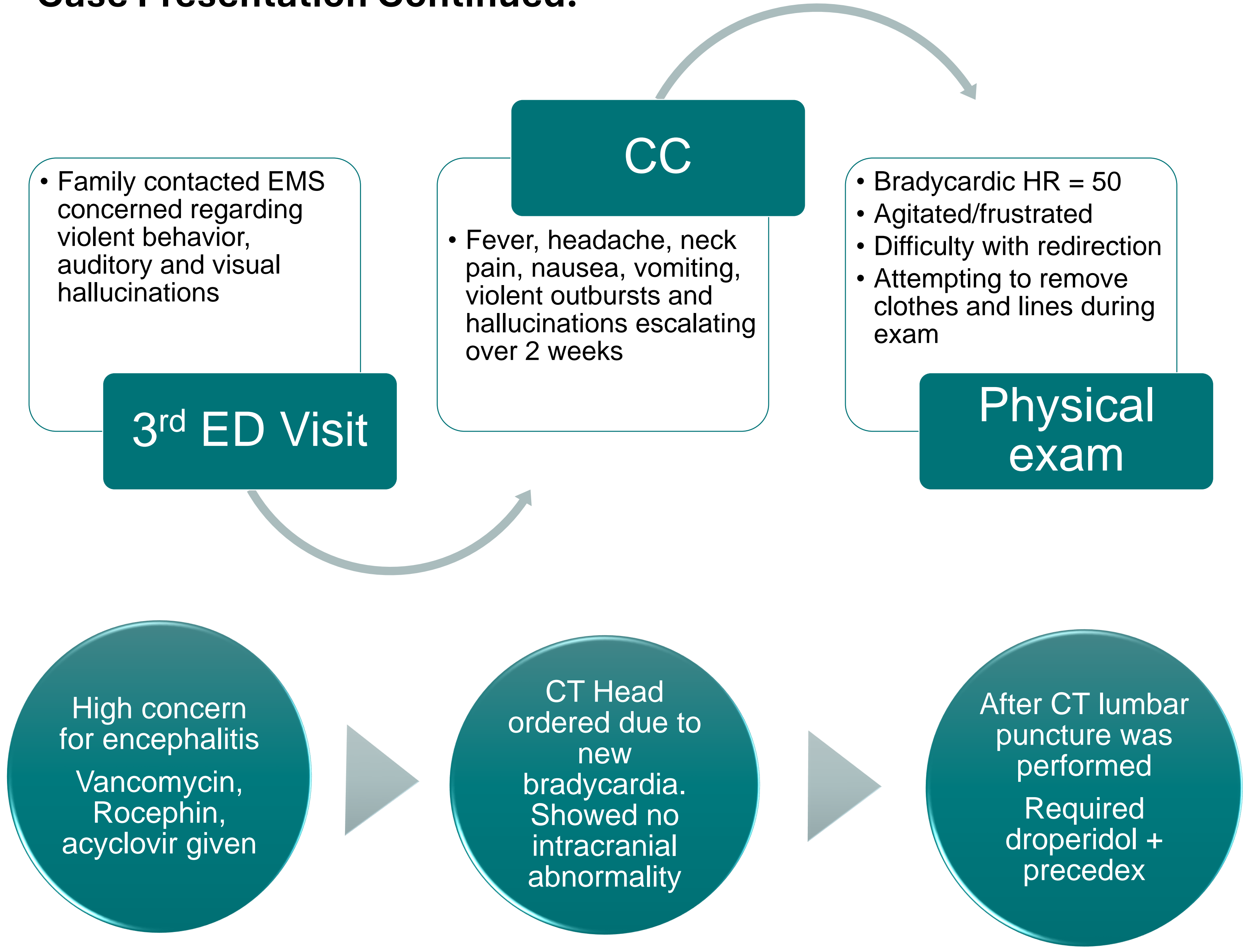
- Herpes simplex virus (HSV) is a leading cause of sporadic encephalitis worldwide^{1,2,3,4}. A majority of HSV cases are caused by HSV-1 and impacts children and adults in a bimodal age distribution^{1,2,4}.
- Meningoencephalitis caused by HSV-2, on the other hand, makes up less than 20% of encephalitis cases internationally⁴. It is more commonly seen in neonates as well as immunocompromised populations and affects women at a higher rate than men^{1,2,3,4}.
- Here we describe a 40-year-old male who presented to multiple emergency departments in the span of 2 weeks with worsening symptoms and bizarre behavior.

Case Presentation:

A 40-year-old male with past medical history of hypertension and diabetes mellitus presented to the emergency department (ED) on 3 separate occasions in December 2023. Key comparisons below.

1 st ED Visit	2 nd ED Visit
Chief Complaint (CC): Fever, HA, myalgias and dysuria x2 days	CC: Worsened myalgias, numbness to left face + facial droop, bizarre behavior (tore off clothes and was un-redirectable)
Significant Vital Signs (VS): 102.5 F, 105 BPM	VS within normal limits
Labs: CBC, UA, Covid/flu negative, CMP bicarb 22	Labs: UA + ketones, TSH reduced, normal T4, CBC, PT, INR, Procalcitonin normal.
Imaging: None	Imaging: CT head and CTA head and neck = normal
Treatment: IV fluids	Treatment: Ativan, Versed (for worsening agitation)
Disposition: Home	Disposition: AMA after returning to baseline

Case Presentation Continued:



Discussion:

- Herpes simplex virus is a large double stranded DNA virus and is a member of the herpesviridae family. Transmission occurs through close contact to the skin and/or mucosa between individuals.^{1,2}
- A minority of patients have been found to have extragenital complications due to HSV with approximately 8-25% of patients experiencing aseptic meningoencephalitis in the setting of a primary HSV infection^{1,2}
- HSV encephalitis has been associated with behavioral changes including aggression and auditory/visual hallucinations. A rare complication includes Kluver Bucy Syndrome^{1,6}
- Case reports have also described HSV encephalitis being associated with sinus node dysfunction resulting in episodes of bradycardia and sinus node arrest.⁵
- The gold standard for diagnosis of HSV encephalitis has shifted from brain biopsy to polymerase chain reaction (PCR) testing of CSF^{1,2}
- The treatment is IV acyclovir 10 mg/kg every 8 hours over the course of 14 to 21 days in immunocompetent adults.^{1,2}
- Early therapy for HSV encephalitis has been shown to significantly reduce mortality to 19-28%.¹

Learning Pearls:

- This case highlights the importance of considering acutely “agitated” patients as potentially encephalopathic and keeping HSV meningoencephalitis on the differential.
- HSV encephalitis should be considered on the differential as delay in diagnosis and treatment has significantly increased morbidity/mortality.

Labs	Results
Lactate	2.2
CK	407
Phosphorus	1.2
Potassium	3.0
Ammonia	37
CBC, magnesium, ammonia, procalcitonin, TSH	Within normal limits
Syphilis, HIV	Negative

Lumbar puncture Studies	Results
Protein	132.6
Glucose	85
Opening pressure	23
WBC	212
RBC	63
Meningitis/Encephalitis panel	+ HSV-2

Disposition:

- Admitted to the medical intensive care unit for acute encephalopathy secondary to HSV-2 meningoencephalitis.
- Patient was discharged after completing 14 days of IV acyclovir and was transitioned to PO valacyclovir for an additional 7 days.

References

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5. Nicol, P. P. (n.d.-a). *Herpes simplex encephalitis, an unusual cause of sinus node dysfunction: Case report and literature review*. ClinMed International Library. <https://clinmedjournals.org/articles/ijcc/ijcc-2-042.php?jid=ijcc>
6. Costa, R., Fontes, J., Mendes, T., Pereira, M., & Gonçalves, C. (2021, July 22). *Kluver-Bucy Syndrome: A rare complication of herpes simplex encephalitis*. European journal of case reports in internal medicine. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8336756/>