

A Dangerous Obsession: An Adolescent with Wernicke Encephalopathy

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Background

- Wernicke encephalopathy (WE) is a well-known complication of malnutrition commonly associated with chronic alcohol use in adults
- In pediatric patients, WE is rare, and typically associated with chronic illness
- Few cases of Wernicke encephalopathy have been described in adults with various psychiatric disorders including anorexia nervosa and schizophrenia

Presentation

- GC is a 17 year old bi-racial female from a rural county who presented to the pediatric emergency department with primary complaints of gait instability, horizontal gaze nystagmus, and diplopia that had developed following a 9 month period of restricted eating.
- During the year prior to her presentation, she had avoided leaving her home due to intense fears of contracting a respiratory illness and dying
- She endorsed an intense fear of contamination of all foods by nut allergens, despite having no personal history of nut allergy or anaphylaxis
- Her fear of nut allergen exposure grew to include a fear of anaphylaxis when eating any foods, and for nearly 6 weeks prior to presentation, she consumed very little other than water.

Work-Up

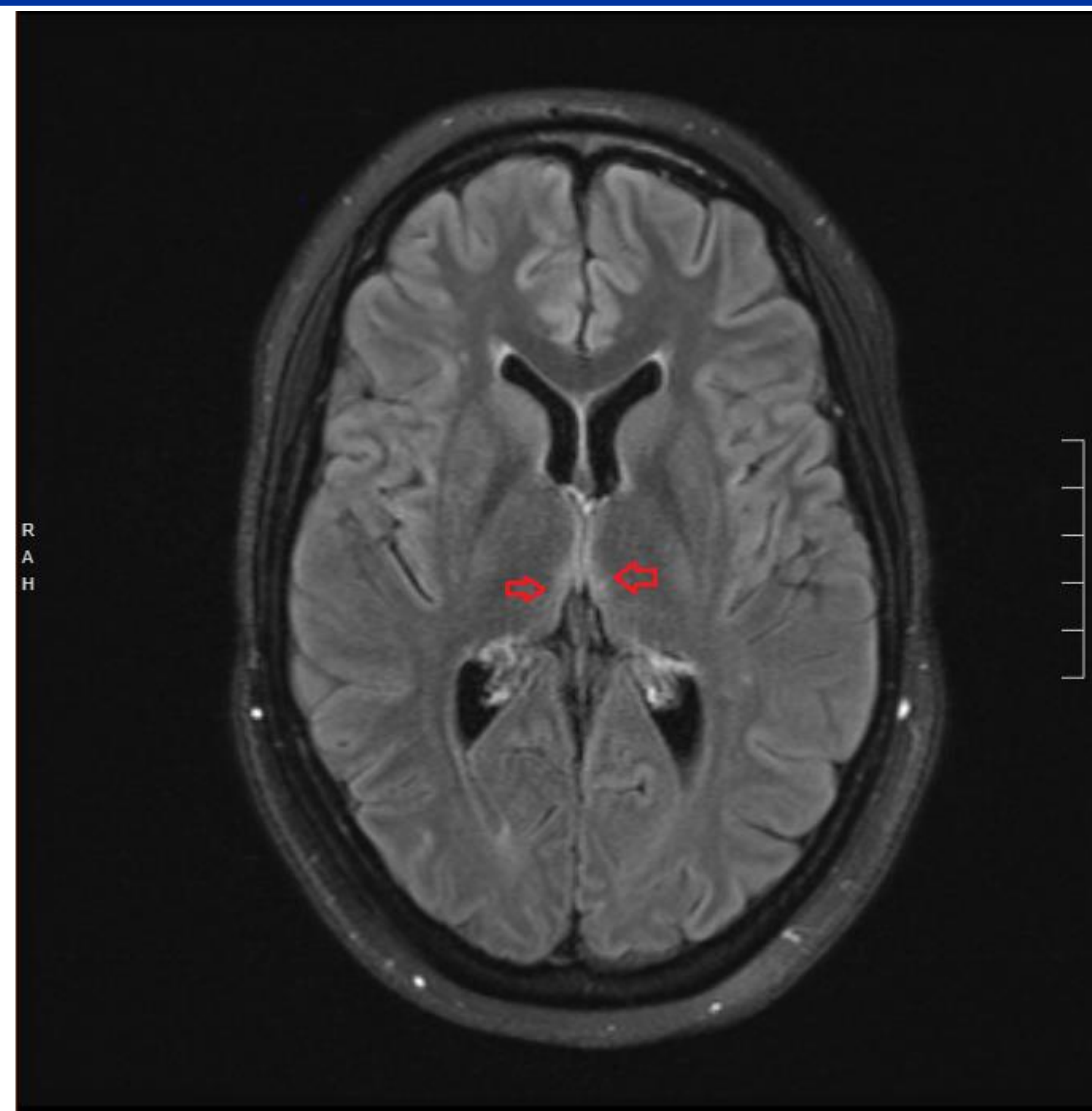
- K 3.3 mmol/L, Albumin 3.8 g/dL, Mg 1.6 mg/dL, Ph 2.5 mg/dL
- CBCd WNL
- Thyroid studies normal
- Vitamin D 15.4 ng/mL
- Vitamin B1 (thiamine) – 29 nmoL/L (normal 70-180)
- MRI brain showing punctate T2 hyperintensities in the white matter of both cerebral hemispheres, in both thalami medially, and periaqueductal gray matter

Treatment Course

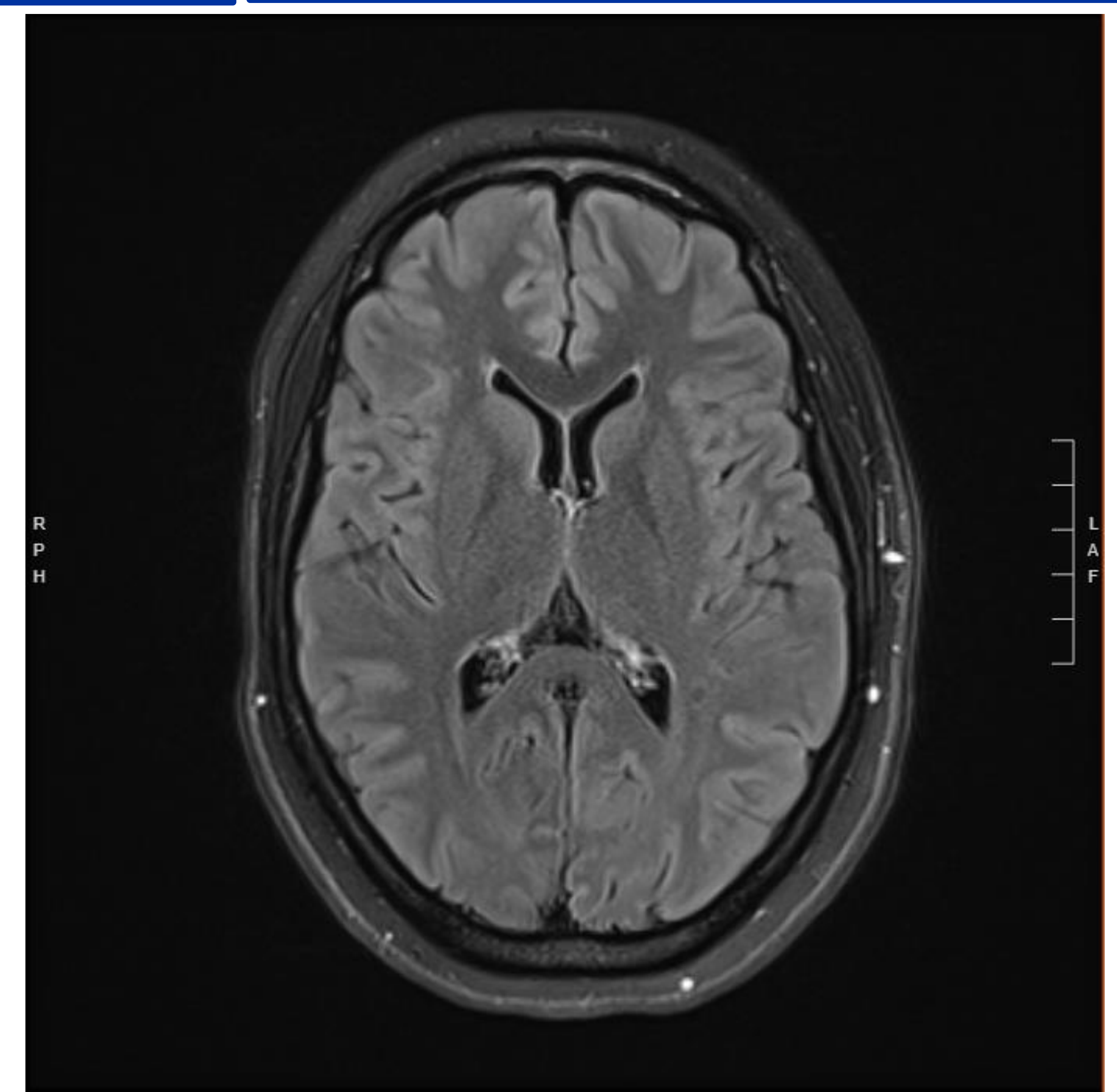
- Patient was admitted to progressive care/telemetry unit in Kentucky Children's Hospital and started on re-feeding protocol with high dose thiamine treatment (15 doses of IV Thiamine 500 mg)
- Patient diagnosed with severe obsessive-compulsive disorder with minimal insight after consultation with psychiatry
- Initiated on Escitalopram with rapid titration up to 20 mg during hospitalization
- Gained 6 lbs and met calorie goals during admission
- Discharged on hospital day 9 on daily oral thiamine 100mg and Escitalopram 20 mg. In home exposure therapy arranged
- At 2 month hospital follow up, weight remained stable, and obsessive eating habits had improved. Escitalopram titrated to 40 mg due to ongoing agoraphobia and obsessive symptoms.
- Significant symptom improvement at 4 month visit. Neurological symptoms now absent, follow up MRI normal

Discussion

Anorexia nervosa has also been infrequently described as a causative etiology of WE, and there is literature to suggest that there is underdiagnosis and late recognition of WE in patients with schizophrenia (Oudman, 2021). Adolescent females are at highest risk of being diagnosed with anorexia nervosa (Neale, 2020), and thus there may be more anchoring by providers to diagnose a patient such as ours with an eating disorder. Case reports have described Wernicke Encephalopathy in patients with chronic illness and comorbid OCD (Sahu, 2020). However, this case, to our knowledge is unique in that it involves a previously healthy adolescent. The severity of this presentation highlights the specific mental health challenges that children and families have faced both during and immediately following the COVID-19 pandemic and subsequent isolation. Our case also highlights the importance of thorough evaluation for psychiatric comorbidities or alternative diagnoses in cases of suspected eating disorder.



Initial MRI showing t2 hyperintensity in bilateral medial thalami (red arrows)



Follow up MRI 4 months after treatment of vitamin deficiency and obsessive compulsive disorder

References

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