Cleveland Clinic

Case-Report: Late-Onset Anorexia Nervosa complicated by Psychosis and Wernicke Encephalopathy

Jonathon Hoffman, MD, Stacey Roll, DO, Jack Owens, MD

Cleveland Clinic Neurologic Institute

Overview

Anorexia nervosa (AN) is an eating disorder that is most commonly diagnosed in adolescence and early adulthood (Volpe, 2016). Here, we describe a rare, unusual , and otherwise unreported case of **late onset AN** complicated with **psychosis** and **Wernicke Encephalopathy (WE)**.

The patient was a **54-year-old female** with no history of psychotic, mood, or eating disorders who presented to the emergency department with **confusion**, **weight loss**, and **falls**. Exam findings of **severe emaciation** and **hypotension** were complemented by neuropsychiatric symptoms of **paranoia**, **cognitive impairment**, **disorientation**, **ataxic gait**, and **extraocular movement abnormalities**. Lab work showing malnutrition was evident and a **BMI of 12** was recorded.

History uncovered a **rapidly progressive decline over ten months**. Initial signs of generalized anxiety, panic attacks, and social withdrawal escalated to **excessive exercise**, **restricted food intake**, **insomnia**, and **psychosis**. **Paranoid delusions** and a **belief in government surveillance** manifested, leading to **profound social isolation**. After encounters with medical and psychiatric providers, the patient received a **misdiagnosis of bipolar disorder** and further deteriorated despite treatment with aripiprazole.

Case Outline

Presentation

- **Age/Gender:** 54-year-old female
- **Significant History:** Social anxiety, recently diagnosed "bipolar disorder"
- **Date:** Early November 2023
- **Reason for ED visit:** Confusion, disorientation, anxiety, severe weight loss, falls at home
- **Reason for admission:** Severe hypoglycemia, bradycardia, hypotension, electrolyte abnormalities

Initial Examination

- **Appearance:** Emaciated Caucasian female, wearing sunglasses and a baseball cap, flat appearing
- **Behavior/Speech:** Pleasant, mostly cooperative, sitting very still in bed / soft and quiet non-spontaneous speech
- **Attention/Orientation:** Poor, delayed response to questions / oriented to person and place, not month or date
- **Insight:** Nil regarding current physical condition and symptoms
- **Physical Findings**
  - **BMI:** 12.58 (29.2 kg, 1.52 m) | **Vital Signs:** BP 94/60, HR 53
  - **Neurologic Exam:** Deficits in extraocular movements, bilateral abducens palsy, limited vertical movements; ataxic gait
- **Initial Labs:** Transaminitis (AST/ALT 68/98), hypokalemia (3.0), hypoalbuminemia (3.3), macrocytic anemia (MCV 100.3, HCT 32.6), hypoglycemia (glucose 38)

Collateral History

- No significant prior medical or psychiatric history before onset of these new symptoms except for mild social anxiety treated with escitalopram
- **Timeline:**
  - **t-10m:** Switched to a more stressful job, outpatient treatment with escitalopram
  - **t-6m**: Increased generalized anxiety, withdrawal from family, panic attacks
  - **t-5m:** Panic attack at primary care visit, refused vitals and questions, visibly anxious, circumstantial thought process, declined voluntary psychiatric admission
  - **t-4m:** Reduced sleep, obsession with appearance and body weight, excessive exercise, food restriction, diagnosed with bipolar disorder, started on aripiprazole (noncompliant)
  - **t-3m:** Vague symptoms of excited catatonia, paranoia, delusions of reference, donning of sunglasses due to fear of government surveillance, ideas of reference, decreased social engagement, further reduced food intake
  - **t-2m:** Vague suicidal ideations, declined inpatient psychiatric admission, continued severe anxiety and circumstantial speech, aripiprazole compliance for a few weeks then self discontinued
  - **t-1m:** Sudden weight drop, denied eating disorder program due to low weight, neurologist visit for ataxia/confusion with MOCA score 18/30

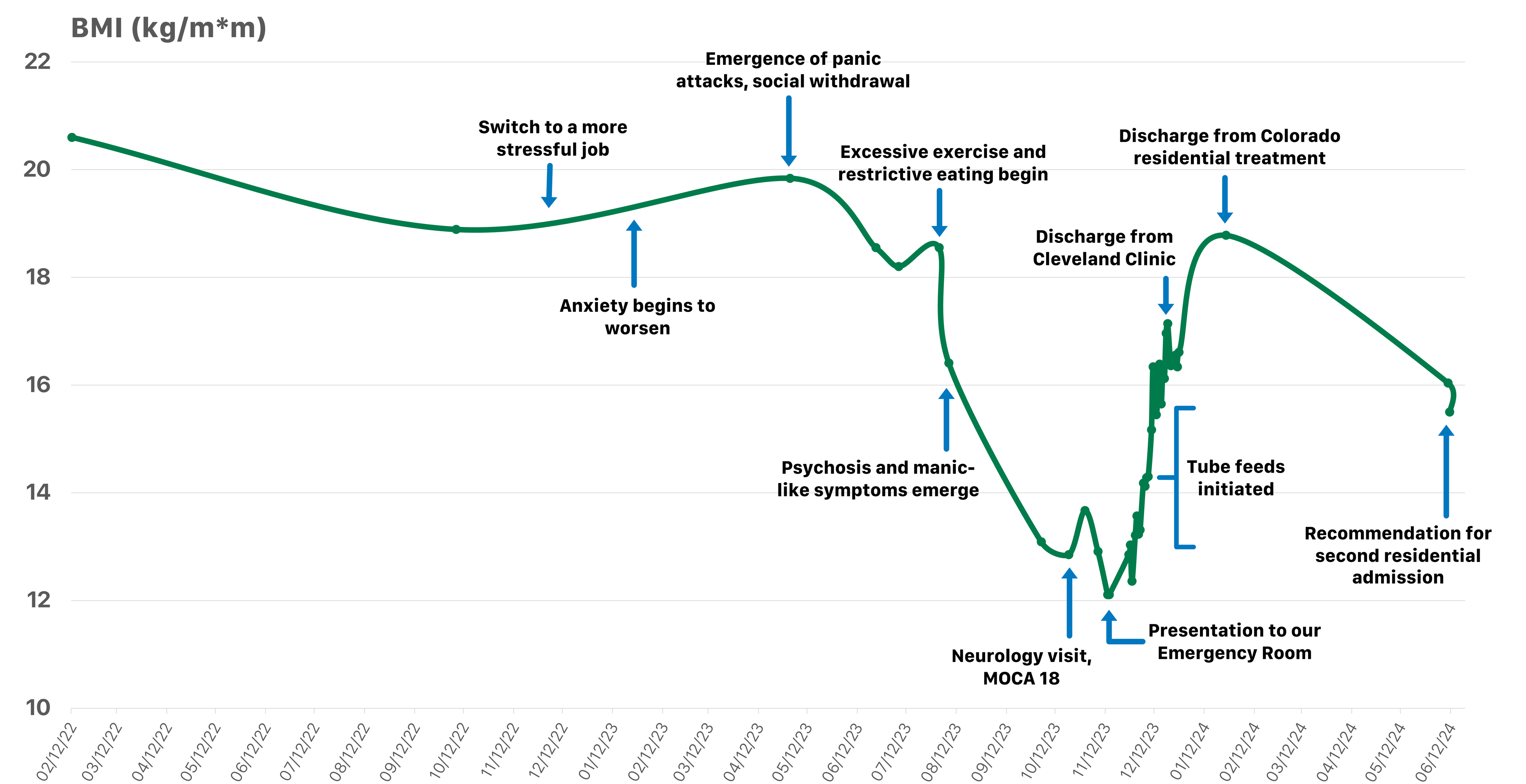
Hospital Course

- **Treatment:**
  - **Psychosis:** Olanzapine initiated; aripiprazole was discontinued
  - **Encephalopathy:** Intravenous thiamine regimen
  - **Adjunct Medication:** Resumed escitalopram
- **Symptomatic Improvement:** Significant improvement in cognition after thiamine administration, though more eating disorder symptoms emerged, including excessive exercising in room, attempts to walk stairs, prolonged bathroom time (possible purging)
- **Other work up:**
  - **Autoimmune Encephalitis Workup:** Negative
  - **MRI:** Incidental small schwannoma, otherwise no abnormalities
- **Transfer:** After three weeks at regional hospital, transferred to Cleveland Clinic Main Campus for Corpak placement late November 2023. Received tube feeds for approximately four weeks, discharged late December 2023
- **Inpatient Residential Treatment:** Admitted to eating disorder facility in Denver, Colorado. At that admission, BMI improved to 16.58 (38.5 kg), though was with lingering anxiety and concerns about her physical appearance
- Ultimately returned to Ohio in mid-January 2024

Follow-Up

- **Late January 2024:** Primary care visit following return to Ohio, BMI now 18.78
- **June 2024:** Primary care visit, had discontinued medications, found to be hypotensive, bradycardic, BMI 15.04, advised to go to ED but discharged with follow-up recommendations for voluntary re-admission to residential eating disorder program
- **August-September 2024:** Admitted to a residential program in Toledo, OH (notes unavailable)
- **As of October 2024:** No further updates available

Timeline & Body Mass Index Data



Discussion & Importance

Rarity and Complexity

- **Limited Case Reports**: There are only a few reported cases of AN complicated by both psychosis and WE (Brigadeiro, 2016; Altinyazar 2010), and only 12 cases of AN with WE documented in the literature (Safran, 2023). The combination of late-onset AN, psychosis, and WE is even more rare, if not yet reported at all.
- **Late-Onset AN**: Late-onset AN itself is uncommon, accounting for only 1% to 7.1% of all AN cases (Tan, 2018; Beck, 1996).

Diagnostic Challenges

- **Overlap of Symptoms**: Symptoms of AN, psychosis, and WE can overlap, making accurate diagnosis difficult. Malnutrition can exacerbate or mask psychotic symptoms, and WE can present with confusion and disorientation that could be mistaken for the disorganization domain of psychotic illness.
- **Misdiagnosed Mania**: Anorexia nervosa may sometimes be confused with manic episodes due to overlapping symptoms. The hyperactivity, decreased need for sleep, and obsessive behaviors seen in AN can mimic the elevated mood, increased energy, and reduced sleep needs characteristic of mania in bipolar disorder. Additionally, the restrictive eating and excessive exercise associated with AN can be misinterpreted as the impulsive and high-energy behaviors seen during manic episodes.
- **Ataxia and deconditioning**: Patients with AN may present with falls secondary to presumed weakness and deconditioning, however consideration should be given to ataxia due to WE or other neurologic sequelae

Treatment Considerations

- **Multidisciplinary Approach**: A multidisciplinary team involving psychiatrists, psychologists, dietitians, and other healthcare professionals is essential for managing these comorbid conditions.
- **Nutritional Rehabilitation**: Immediate thiamine supplementation and nutritional rehabilitation are critical in treating WE and preventing further complications, which itself requires prompt and accurate diagnosis of a possible underlying WE.

Conclusion

This case underscores the imperative nature of **thorough diagnostic exploration** when faced with a farrago of **overlapping** psychiatric and neurological symptoms in **an age demographic not often associated with new-onset AN**. It is important to **recognize** this disorder's exceedingly rare complications and presentations as the first step to make an **accurate diagnosis** and provide **proper treatment**.

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Disclosures

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Jonathon Hoffman, MD
hoffmaj14@ccf.org

9500 Euclid Ave
Cleveland, OH