Emetophobia: A case of nausea leading to dehydration in an adolescent female

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Abstract
Emetophobia is defined as the specific fear of vomiting and avoidance behaviors related to vomiting situations; the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, specifies this condition as a Specific Phobia: Other type: Vomiting (SPOV). Our case report describes an adolescent presenting with medical complications, specifically notable dehydration, due to new onset Specific Phobia: Other type: Vomiting after experiencing a bout of viral gastroenteritis. In this patient’s case, her severe anxiety served as the root cause for a significant decrease in her quality of life for a year and was not identified by healthcare providers until after an extensive medical workup had taken place. Treatment involved alleviating her dehydration with slow introduction of foods with high water content into her diet and addressing her anxiety with hydroxyzine as a short-term intervention and a selective serotonin reuptake inhibitor for long-term management. This treatment plan allowed for our patient’s symptoms to resolve over the course of a few months and she was able to return to her usual activities of daily living. With discussing emetophobia, this case highlights a topic that is not largely discussed in the literature surrounding adolescent health.

Keywords
Emetophobia, adolescent medicine, pediatrics, mental health, anxiety, advocacy

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Introduction
Emetophobia is defined as the specific fear of vomiting and avoidance behaviors related to vomiting situations; the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), specifies this condition as an anxiety disorder called Specific Phobia: Other type: Vomiting (SPOV), while the World Health Organization would classify this as Specific Phobia (International Classification of Diseases 11th Revision (ICD-11) 6B03). Criteria for Specific Phobia include marked fear about a specific situation that leads to active avoidance of the situation. The fear is out of proportion to the actual danger, is persistent, and causes clinically significant distress in important areas of functioning. There are limited scientific data on the prevalence of emetophobia, and most studies focus on the adult population. However, a few of these studies report that symptom onset tends to occur during puberty. A systematic review of the literature pertaining to SPOV confirms that many people with SPOV experience decreased quality of life, including negative educational and occupational impacts (9% reported missing class; 20% reported leaving work frequently). In the following case presentation, chronic dehydration with nausea after an acute gastroenteritis served as a persistent stimulus to anxiety related to a fear of vomiting. This fear was the primary cause for significant impairment in the patient’s health and quality of life for an entire year. Unfortunately, the primary source of this patient’s constellation of symptoms was not identified until an extensive medical workup was completed that did not include exploration of the psychosocial etiology of her symptoms.

Case
A 15-year-old female with no significant past medical history presented with nausea for 1 year. She was in her usual state of good health until she experienced a bout of viral gastroenteritis that involved nausea and vomiting. The illness lasted less than 1 week; however, the nausea she experienced with the illness persisted. Her associated symptoms over the interceding year included lightheadedness that improved while lying flat.
nausea that was worse in the afternoon and evening, and panic attacks when her nausea flared. She subsequently was unable to tolerate most liquids due to an extreme fear of vomiting that began immediately following her illness. Due to the persistent nausea, the patient was seen by a gastroenterologist; a complete blood count, complete metabolic panel, Helicobacter pylori stool antigen, abdominal films, gastric emptying study, and endoscopy with biopsies for H. pylori and celiac sprue were obtained and all were within normal limits. An abdominal computerized tomography revealed small bilateral renal calculi, and the patient was subsequently seen by a nephrologist and urologist. A renal ultrasound several months into the patient’s illness revealed resolution of the calculi; however, her symptoms of nausea, fear of vomiting, and intermittent fatigue persisted. The patient was then referred to the adolescent medicine clinic, approximately 6 months after symptom onset, for further evaluation for disordered eating.

At presentation, the patient complained that she was nauseated daily and “always dizzy.” She would become especially lightheaded upon standing. She was able to eat solid foods, but reported greater fear of emesis after drinking liquids; therefore, she restricted her liquid intake. The patient reported urinating once daily, and, of note, her weight had not changed for years. Her mother noted that the patient felt better one time earlier in the year after receiving intravenous fluids at an urgent care center; the patient also urinated 4–5 times the day of that urgent care visit. The patient’s family history was non-contributory; social history was remarkable for an intact family in addition to good school performance and socialization, normal teen diet with few liquids, no history of significant anxiety or depression, and no significant risk behaviors related to sex, drugs, or violence. The symptoms the patient was experiencing had necessitated withdrawal from public school and enrollment in home school. During this time, the patient began seeing a therapist in her area to help her cope with the social losses and the anxiety related to vomiting she was experiencing.

On this first clinic visit, the patient’s vital signs indicated a high resting heart rate of 96 beats per minute that went to 106 beats per minute after 5 min of standing; standing blood pressure did not decrease. The body mass index was within the normal range (23.4 kg/m², 81st percentile for age). Her physical examination was otherwise unremarkable. Urinalysis showed a specific gravity of >1.030, and red blood cells were present as the patient was experiencing breakthrough bleeding after recent Nexplanon placement for menstrual control. Due to this clinical picture consistent with dehydration, the patient was counseled to increase her fluid intake by eating foods with higher fluid content such as puddings and soups to slowly improve her hydration status. The team prescribed hydroxyzine 25 mg daily to immediately address the anxiety/panic related to her fear of vomiting as well as to, potentially, independently address her nausea. She was also urged to continue seeing her local therapist for cognitive behavioral therapy (CBT).

At the patient’s follow-up appointment approximately 2 weeks later, she endorsed a moderate improvement in her nausea with increased “thick fluid” intake and increased urination to twice daily. Her urine specific gravity decreased to 1.020 (sample again included a “large” amount of red blood cells due to vaginal bleeding). She reported that the hydroxyzine was having an overall positive effect on her anxiety, though the anxiety had not completely resolved. A selective serotonin reuptake inhibitor (SSRI), Prozac (10 mg per day increasing in 7 days to 20 mg per day), was added to her medication regimen, and she was encouraged to continue focusing on increasing her fluid intake. At the second follow-up visit 3 months after initial presentation, she reported significant improvement of anxiety and fear of vomiting; she had been able to return to eating and drinking normally. Her urine specific gravity at this visit was 1.010 (with “large” red blood cells due to vaginal bleeding), and the patient reported urinating multiple times per day. Mother reported that the patient was going out with friends again and interested in going back to school in the fall. When last seen, 18 months since her initial presentation, the patient reported no anxiety or panic related to vomiting and was cleared to return to her primary care provider on a low-dose SSRI.

Discussion

The understanding of treatment modalities in the setting of emetophobia, especially among adolescents, is limited. Most of the literature regarding pediatric populations is related to the use of CBT, behavior therapy, and exposure therapy.4,7 There is one randomized controlled trial of 24 adult patients with SPOV receiving CBT that found the intervention to have positive effects on patients’ long-term symptoms.8 There are a few reported cases of adults with emetophobia who were given SSRIs in conjunction with CBT with positive results; however, with the exception of one case report describing successful treatment with an SSRI for a 16-year-old individual with emetophobia, they do not pertain to the adolescent population.9-11

Our treatment approach for the patient described in this case focused on a combination of medical and psychological interventions. To address our patient’s physical symptoms of dehydration, the inciting event for her emetophobia, our patient was counseled to increase her fluid intake by eating foods that contained more liquid such as puddings and soups to slowly improve her hydration status. By slowly engaging with thickened liquids first, she became less nauseated and thus less fearful of vomiting. This served as an immediate treatment of the medical trigger of her fears. We addressed the patient’s underlying anxiety with hydroxyzine in the short term and an SSRI for long-term management. The combination of treatments allowed for both the relatively quick resolution of nausea and dehydration and the more long-standing improvement of the patient’s underlying anxiety, thus...
breaking the cycle of emetophobia leading to dehydration, leading to nausea, leading to emetophobia.

**Conclusion**

For this patient, delay in the treatment of her symptoms stemmed from delay in recognizing her anxiety as a primary precipitating factor. There is no published research regarding the prevalence of emetophobia specifically among adolescents. It is imperative to understand and appreciate the impact undiagnosed mental health conditions have on an adolescent’s medical health and resulting quality of life. This case demonstrates the importance of fully assessing the relevant psychosocial elements related to any disease process to fully appreciate the scope of disease and develop potentially effective treatment modalities when working with adolescent patients.

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**Ethical approval**

Our institution does not require ethical approval for reporting individual cases or case series.

**Informed consent**

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