

RESEARCH ARTICLE

Fear of Vomiting and Low Body Weight in Two Pediatric Patients: Diagnostic Challenges

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Abstract

Fear of vomiting can be a symptom associated with several disorders, including Eating Disorders (ED), Specific Phobia (Emetophobia), Avoidant Restrictive Food Intake Disorder (ARFID) and Obsessive Compulsive Disorder (OCD), making proper diagnosis challenging. At this time the literature exploring this symptom is limited, and to our knowledge very few cases have been described in the child and adolescent population. We report here the cases of one child and one adolescent presenting with significant weight loss, food restriction and fear of vomiting. The child's fear of vomiting masked a concurrent desire to achieve fitness and weight loss, which was uncovered following weight restoration. The adolescent patient, although significantly underweight and food avoidant, also expressed no concerns with body image, until weight restored. The history, course in hospital and management of these patients is discussed, along with several challenges that complicated the diagnosis.

Key Words: *eating disorder, fear of vomiting, diagnosis, child, adolescent*

Résumé

La peur de vomir peut être un symptôme associé à plusieurs troubles, notamment les troubles alimentaires (TA), une phobie spécifique (émétophobie), le trouble de l'alimentation sélective et évitante (TASE) et le trouble obsessionnel compulsif (TOC), ce qui complique la tâche de poser un diagnostic approprié. À l'heure actuelle, la littérature explorant ce symptôme est limitée, et à notre connaissance, très peu de cas ont été décrits dans la population des enfants et des adolescents. Nous rendons compte ici des cas d'un enfant et d'un adolescent qui présentaient des pertes de poids significatives, une restriction alimentaire et la peur de vomir. La peur de vomir de l'enfant masquait un désir co-occurent d'atteindre la forme physique et une perte de poids, ce qui a été découvert après avoir repris du poids. Le patient adolescent, bien que d'un poids significativement insuffisant et évitant la nourriture, n'exprimait pas non plus de préoccupations d'image corporelle, jusqu'à ce qu'il ait repris du poids. Les antécédents, l'évolution à l'hôpital et la prise en charge de ces patients sont discutés, ainsi que plusieurs difficultés qui compliquaient le diagnostic.

Mots clés: *trouble alimentaire, peur de vomir, diagnostic, enfant, adolescent*

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Fear of vomiting is a symptom that can occur in the context of several different psychiatric disorders. Vomiting phobic individuals often devise elaborate patterns of eating in order to reduce the possibility of emesis, leading to functional impairment (Veale, Costa, Murphy, & Ellison, 2012; Price, Veale, & Brewin, 2012). These behaviours can include restriction of food volume and variety, excessive checking of food freshness, slow eating, avoidance of restaurants or others situations where eating may be involved, and unnecessary medicating with anti-emetics (Veale et al., 2012; Van Hout & Bouman, 2012). Furthermore, patients with this symptom report excessive attention to gastrointestinal sensations and a tendency to catastrophize normal GI activity as signs of imminent nausea and vomiting (Veale et al., 2012). Possible diagnoses involving this symptom include: Eating Disorders (ED), Specific Phobia (Emetophobia), Avoidant Restrictive Food Intake Disorder (ARFID) and Obsessive Compulsive Disorder (OCD).

In EDs, the symptom most commonly manifests as food avoidance and an intense fear of gaining weight (American Psychiatric Association [APA], 2013). In the case of Specific Phobia, the patient does not present with body image disturbances, but in an effort to prevent vomiting can exhibit avoidance and checking behaviors strongly reminiscent of OCD. Fear of vomiting is also associated with Avoidant Restrictive Food Intake Disorder (ARFID), a disorder defined as an eating or feeding disturbance characterized by patterns of avoiding or restricting food intake without body image concerns (APA, 2013; Black & Andreasen, 2014, Manassis 1990). In OCD, the obsessive fear of vomiting is associated with intrusive thoughts related to emesis and many rituals to prevent this occurrence, such as carrying a container in the event vomiting occurs or checking expiry dates. Other obsessions and compulsions such as fear of contamination and excessive hand washing would be expected in OCD (Veale et al 2015; APA, 2013). The treatment of children with simple emetophobia using graded exposure has been described previously in the literature (Faye, Gawande, Tadke, Kirpekar & Bhave, 2013; Manassis & Kalman, 1990; Moran & O'Brien, 2005; Veale, Hennig & Gledhill, 2015; Whitton, Luiselli & Donaldson, 2006). Here we report on one child and one adolescent whose primary initial symptom, fear of vomiting, presented diagnostic challenges due to complex medical and psychiatric co-morbidity.

Case 1

A 15-year-old female was initially admitted to the hospital due to severe malnutrition at approximately 70% of an ideal body weight. A recent episode of stomach flu had caused her longstanding fear of vomiting to intensify, leading to significant weight loss. The patient expressed being worried that contact with germs would cause her to contract gastroenteritis, and she had been excessively washing her hands and praying to prevent contamination. She also engaged in

several rituals meant to stave off illness and vomiting, notably knocking on doors specific numbers of times, praying excessively before bed, and refusing to eat past six o'clock in the evening. She also regularly checked expiry dates on food and carried a plastic bag with her in case she needed to vomit. The patient reported nightmares about vomiting and panic attacks daily. Her anxiety was centered around meals and possible triggers of vomiting such as watching movies in which the actors vomited. She denied anxiety in other aspects of her life. The patient admitted to being concerned about her low weight, and wanted to gain at least ten pounds.

The patient was prescribed Escitalopram 20 mg once daily, as well as Olanzapine five mg at bedtime for her anxiety. Given the ambiguity of the initial presentation, it had been initially unclear whether she suffered from a restricting type of Anorexia Nervosa (AN), ARFID, or OCD. However, since the patient initially expressed no body image concerns and readily put on weight in hospital, she was diagnosed with ARFID and OCD. The patient was discharged from the Eating Disorders Unit following some successful weight restoration. At present, although she is struggling to maintain a minimally healthy body weight, she has begun expressing body image concerns related to her weight gain and has limited her food choices to low calorie foods. She continues to have obsessions around germs and sanitation. She continues to meet criteria for OCD, and now meets criteria for Anorexia Nervosa (AN). Although her compliance with the program was limited, CBT was attempted with respect to a graded hierarchy to germs and contamination in addition to body image acceptance.

Case 2

A 10-year-old male at an estimated 81% ideal weight initially presented as an outpatient to the Eating Disorders Program with symptoms of intense fear of vomiting. These symptoms had begun following a bout of gastroenteritis. He denied any intentional vomiting or food restriction for the purposes of weight control. He did check labels looking for fat content, and stated he felt sick after eating fatty foods. On the Children's Eating Attitudes Test (ChEAT) measure he denied wanting to be thinner, or feeling guilty after eating. He met criteria for ARFID at this time.

At the age of 13 years he was admitted to the Eating Disorders Unit due excessive anxiety and a failure to gain weight. He was first prescribed Olanzapine five mg at bedtime, but later switched to Clomipramine 25 mg at bedtime. On interview he was uncooperative, and disclosed very little. His parents had noted that he would eat only certain categories of food, and took an unusually long time to finish meals. The patient also restricted his food intake for fear that eating would make him vomit. Though the patient denied concerns with body image, his parents reported that he was very preoccupied with being healthy and living a healthy

lifestyle. This included refusing unhealthy and calorie rich foods, and being involved in high levels of exercise. He had developed a concurrent fear of germs, being worried that they would make him sick to the point of vomiting. He often engaged in reassurance-seeking behavior. Particularly at night, he would ask his mother repeatedly if he appeared sick, and would ask her to check his temperature. The patient was discharged from the Eating Disorders Unit following weight restoration with a diagnosis of AN, generalized anxiety disorder (GAD), and OCD. He received CBT with graded exposure for the illness fears and rituals.

Discussion

In the cases reported, both patients presented with food restriction, weight loss and avoidance behaviors. During the initial assessment, the concern with limiting food intake and the associated low body weight made the possibility of AN likely, however it took some time for this diagnosis to become fully apparent. The co-morbidity of OCD added complexity to the diagnostic picture.

OCD is a frequent comorbidity of patients with AN. According to the DSM-5, OCD can be diagnosed in up to 30% of AN sufferers (APA, 2013). Both patients were diagnosed with OCD as they had significant checking behaviours associated with fear of vomiting as well as ritual compulsions in other aspects of life. The presence of fear of vomiting in an underweight child or adolescent makes diagnosis complicated, partly from a possible lack of maturity or insight into their thoughts, symptoms and behaviors, and malnutrition which can affect cognitive function. For both patients, over time it became apparent that while the fear of vomiting was an initial main motivator in the refusal of food, a desire to be 'healthy' or 'fit', along with avoidance of high calorie foods supported a diagnosis of AN. A limitation of these case reports is that we did not obtain objective measures of OCD symptomatology or emetophobia and did not do a standardized clinical interview.

In summary, fear of vomiting is a symptom associated with several different disorders, which makes accurate diagnosis challenging, particularly in the child and adolescent population. The presence of this symptom should alert the clinician to be vigilant for OCD and AN. Perhaps rates of

comorbidity are high because AN, Specific Phobia, ARFID and OCD form a spectrum rather than discreet categories. In addition, symptoms can vary with time and developmental trajectory. This challenge is particularly striking in children and adolescents, whose motivations may not only be multilayered, but at times difficult to elicit due to a lack of cooperation or insight. Patients with such complex co-morbidity require careful monitoring over time and a treatment approach that combines nutritional rehabilitation, medical monitoring, psychotherapy and medication.

Acknowledgments / Conflicts of Interest

The authors have no financial relationships to disclose.

References

- Black, D., & Andreasen, N. (2014). Introductory textbook of psychiatry (6th ed.). Washington, DC: American Psychiatric Pub.
- Diagnostic and statistical manual of mental disorders: DSM-5. (5th ed.). (2013). Washington, D.C.: American Psychiatric Association.
- Faye, A. D., Gawande, S., Tadke, R., Kirpekar, V. C., & Bhawe, S. H. (2013). Emetophobia: A fear of vomiting. *Indian journal of psychiatry*, 55(4), 390.
- Graziano, P. A., Callueng, C. M., & Geffken, G. R. (2010). Cognitive-behavioral treatment of an 11-year-old male presenting with emetophobia: A case study. *Clinical Case Studies*, 1534650110384436.
- Manassis, K., & Kalman, E. (1990). Anorexia resulting from fear of vomiting in four adolescent girls. *Canadian Journal of Psychiatry*. *Revue canadienne de psychiatrie*, 35(6), 548-550.
- Moran, D. J., & O'Brien, R. M. (2005). Competence imagery: A case study treating emetophobia. *Psychological Reports*, 96(3), 635-636.
- Price, K., Veale, D., & Brewin, C. (2012). Intrusive imagery in people with a specific phobia of vomiting. *Journal of Behavior Therapy and Experimental Psychiatry*, 672-678.
- Van Hout, W., & Bouman, T. (2011). Clinical features, prevalence and psychiatric complaints in subjects with fear of vomiting. *Clinical Psychology & Psychotherapy*, 531-539.
- Veale, D., Costa, A., Murphy, P., & Ellison, N. (2011). Abnormal eating behaviour in people with a specific phobia of vomiting (Emetophobia). *European Eating Disorders Review*, 414-418.
- Veale, D., Hennig, C., & Gledhill, L. (2015). Is a specific phobia of vomiting part of the obsessive compulsive and related disorders?. *Journal of Obsessive-Compulsive and Related Disorders*, 7, 1-6.
- Whitton, S. W., Luiselli, J. K., & Donaldson, D. L. (2006). Cognitive-behavioral treatment of generalized anxiety disorder and vomiting phobia in an elementary-age child. *Clinical Case Studies*, 5(6), 477-487.

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