

Chronic psychogenic vomiting: Clinical and psychological profile of three adolescent female patients

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Abstract

The phenomenon of psychogenic vomiting is generally a rare presentation in mental health centers. Diagnosis of this disorder is often delayed, which extends the impact of symptoms on social and occupational functioning. We report clinical and psychological profile of three cases with psychogenic vomiting and discuss them in light of available literature. We also aim to build an understanding of the psychological underpinnings of this condition. This paper will add to the literature on vomiting with psychogenic origin. Another important goal of this case series is to establish that vomiting associated with psychological factors is unique in its presentation and requires further attention.

Keywords

psychogenic vomiting; stress; nosology; cyclic vomiting syndrome; eating disorders

Abbreviations

CVS: Cyclic vomiting syndrome; CBT: Cognitive behavior therapy

Introduction

'Psychogenic vomiting' presents rarely in psychiatric units and often gets delayed attention due to misdiagnoses [1]. This condition, however, can overtime become highly disabling [2] and so, it should receive early identification and treatment. Lack of clear diagnostic criteria in current psychiatric classificatory system makes it difficult to report cases of psychogenic vomiting and impedes development of guidelines for management. Psychogenic vomiting gets subsumed under Other Specified Eating Disorders (F50.89) in ICD-10. It is therefore likely that, the prevalence of eating disorders other specified is over reported. DSM V does not acknowledge vomiting due to functional cause.

In literature, Cyclic Vomiting Syndrome (CVS) is closest in clinical presentation and diagnosis to psychogenic vomiting. The former is characterised by recurrent, discrete, stereotypical episodes of vomiting interspersed by symptom free period of varying length. CVS has a clear diagnostic criteria, and published reports enumerate possible pathophysiology [3,4], treatment for acute phase [3,4] and long-term prophylactic therapy with psychotropic medication [3,4]. Most published reports of CVS appear in the medical or gastroenterology journals. It is surprising that studies cite psychiatric comorbidities [5] with cyclic vomiting, yet psychiatry fails to render a modern psychiatric label to vomiting of possible 'psychogenic origin'. The phenomenon largely remains under with respect to clinical and psychological

correlates. This can be attributed to lack of published cases in literature and there are only handful of available reports [6].

Due to lack of reference points in psychiatry and abundant descriptions of CVS in medical journals, psychogenic vomiting gets misunderstood as a form of vomiting with presumed dysfunction of gut axis associated with structural or biochemical abnormalities [7,8]. This de-focusses the 'psychogenic' factor unique to this condition and undermines any chance that this condition can have to be recognised as predominantly a psychological phenomenon. There is evidence that stress can act as a modulator via the brain-gut axis to influence clinical presentation and outcome of nausea and vomiting, which suggests that the association between functional and psychosocial aspects needs to be investigated [8,9].

Recognition of psychogenic vomiting, both either as a distinct disorder or as a symptom occurring as a part of other mood, stress and anxiety-related disorders, can give this condition its due recognition in psychiatry. It will help in improving understanding of the disorder, its early identification and development of management guidelines.

This paper presents the clinical and psychological profile of three cases with psychogenic vomiting seen at a child and adolescent psychiatric clinic at a tertiary care hospital, A.I.I.M.S., New Delhi, India. It attempts to build literature on vomiting of psychogenic origin. We aim to build a case for psychogenic vomiting as a conceptually different phenomenon from eating disorders or CVS. For this purpose, we have preserved significant portions of history to highlight the role of perceived stress in causation, maintenance and progression of morbidity. Given the clinical presentation in this series of three patients, we emphasize that psychogenic vomiting as a solitary symptom needs clinical and research attention.

Case Series

Case 1:

Ms. A was a 14 year old female and hailed from a rural joint family. She presented with repeated vomiting since 1.5 years and amenorrhea since one year. Symptoms began when her elder brother started taking her home tuitions. He was over-critical of her 'just average' performance. Patient was always afraid of being reprimanded. She often reacted to her brother's scolding by withdrawing to her room, skipping meals and refusing interaction with others. On one occasion, she observed her relative who was suffering from tuberculosis spit blood-stained sputum. Within few weeks, Ms. S vomited after having dinner and her vomitus was also stained red. She was taken to a hospital and was treated symptomatically. She started to have vomiting more frequently, however, was accused by her brother for faking symptoms and using a red color to stain her vomitus. He informed that on most occasions red color was visible around her mouth. Her vomiting at that time was limited to one per week.

After 4-5 of such episodes, she started having frequent vomiting (4-6 per week) containing undigested food particles. These occurred typically within 5-10 minutes of a meal, with no preceding nausea or retching. Patient resumed her meal again after vomiting. Patient's family consulted physicians who provided symptomatic management. Patient had menarche after nearly two months of the onset of vomiting, but after only three cycles, she displayed amenorrhea. Patient appeared to be occasionally worried of her weight or appearance. She asked her sister-in-law a few times if she has gained any weight. She was however reassured with ease. For the next six months, she took meals in reasonable quantity

(resumed meal after post-prandial vomiting episode), maintained weight and continued with activities of daily living.

About 6 months back, vomiting further increased and occurred at any time, with no association with meals. Such episodes were often precipitated by her brother's comments or father's remarks on her academic skills. The patient discussed that she was scared of receiving poor grades. On her exam days, she had bouts of vomiting which continued for an hour. Subsequently, she did not appear for the exams. She was admitted under gastroenterology and subsequently, referred for psychiatric evaluation but family members declined. After discharge, the child reported having thoughts of being severely ill and that she may not ever get well. She appeared sad and tired. Perturbed, parents sought a consultation at the Department of Psychiatry, AIIMS, New Delhi.

The patient did not display voluntary starvation, overt expression of being fat or weight gain, no involvement in exercise or binge eating. There was no abnormality of food handling, use of laxatives, or diuretic abuse. There is no history of unresponsive spells, pervasive sadness of mood, anhedonia, death wishes, suicidal ideation. The patient's history revealed no medical illness, sexual or physical abuse.

Patient was youngest of six siblings (4 brothers, 2 sisters). Her mother was a housewife who was diagnosed with conversion disorder and was asymptomatic for past three years. Case history was collected by a junior resident medical graduate student who was enrolled in post-graduation program and had received supervised training in this area. Case history blank is a standard psychiatric open ended questionnaire that asks in details about history of presenting illness, past history, treatment history, birth, temperament, development, school history and other important areas of functioning. In present case, the birth, development and early childhood history was unremarkable. Her academic performance ranged between average to below average. As per Thomas and Chess's temperament model, the patient's premorbid temperament suggested a difficult temperament indicated by frequent and loud crying and throwing temper tantrums when demands were not met during early childhood years.

General physical and systemic examination revealed no abnormality.

Patient was treated with rehydration, antiemetics in the acute phase along with 20 mg of amitriptyline. She received biweekly sessions of CBT for two months, followed by weekly sessions for two months and fortnightly sessions for a month. She was followed up for six months after which she was lost to follow up. Symptoms remitted in first two months and she remained asymptomatic until her last follow up.

Case 2

Ms M, 15 year old female, a student of Class IX, belonging to urban, joint family presented with persistent vomiting since past three years with fluctuating course.

Patient used to be a topper in her class, but three years back, she obtained IIIrd position in her midterm examinations. She was disappointed and cried for hours. The patient was reassured by family members, however, in the ensuing months, patient started to study harder citing a few new entrants in the class. Patient was constantly preoccupied about getting her first rank back. The overall performance of the patient was same as before. She scored 19 out of 20 and lagged behind the new class toppers by ½ to 1 mark. The patient still felt disappointed. During that time, the class teacher complained to parents about patient's misbehavior with her competitors. Since the commencement of new academic year, parents

noticed a change in the patient's study behavior. Ms. M started self-study as soon she was back from school and continued it without any breaks. Gradually, the patient displayed intolerance of any delay in serving of meals. If the meal was still being cooked or was getting heated, she saved time by consuming packaged food. Occasionally, she did not let mother warm the food and ate it cold. She had her meals alone to avoid in order to save time that was otherwise spent with family at dinner table. The parents, however, gave in to her demands at all times.

It was observed that her mood became more irritable and sensitive to comments from family members. In her next exams, patient again scored a few marks less than the topper. She cried for long hours and reported of headache. She had vomiting, followed by cramps in stomach. After few hours, patient was given biscuits and juice. Within 10 minutes, the patient had nausea and vomiting. This cycle continued for few hours and patient was admitted to a local hospital where she was treated symptomatically. She got promoted to grade X and her efforts at studies increased as well. She completely replaced home cooked meals with restaurant food. Parents initially objected to this, however, in India academics is given a lot of value. Parents argued that since patient was eating restaurant food that saved her time to focus on studies, they didn't mind it. Patient was asymptomatic throughout that time, until the results of quarterly/term exams were declared. After that, the patient started having persistent vomiting. The usual pattern was appearance of ulcers in mouth few days prior to vomiting. Vomiting was preceded by headache that continued for 6-7 hours, which was followed by vomiting. Ms. M reported experiencing nausea, churning sensation in stomach followed by vomiting. The pattern occurred in a cyclic manner within a gap of 8-10 minutes. On occasions, pre and post examinations the patient had vomiting from 8 am in morning till 10 pm in the night with gap of 2-3 days. In between the days, when she was not vomiting, the patient appeared weak but insisted on studying. During this phase, patient appeared worried, irritable, expressed fear of not securing a good rank in exams, remained withdrawn at home, took meals alone and avoided play activities. On enquiry, patient did not report decreased interest in the above activities, however, reported preoccupation with studies and thoughts of conserving time.

No changes in weight were reported. A consultation with gastroenterology department revealed no organic cause, and patient was referred to the Department of Psychiatry for management. A detailed psychiatric evaluation revealed depressed mood. Patient did not display any weight loss, body image disturbance, fear of gaining weight, abnormal food handling, bingeing, motivation to lose weight, misuse of laxatives, diuretics or excessive exercise. Her medical history and personal history revealed no abnormality. There was no signs of physical or sexual abuse on history or physical examination. The patient's birth and developmental history was unremarkable. The patient attained menarche at the age of 15 years and has been having regular menses. The premorbid temperament was slow to warm-up. For example, parents reported that she stayed on the "sidelines" for a while, watching what others are doing until she was encouraged a couple of times.

Patient was treated with anti-emetics and 20 mg of escitalopram. She received weekly CBT sessions for two months with 50% reduction in frequency of vomiting episodes. Patient continued to attend weekly sessions for next four months with full remission. She was followed up on monthly basis for a year and half and she remained asymptomatic.

Case 3

Ms. R was a 13 year old, female, student of class VIII, belonging nuclear family of lower socioeconomic status hailing from rural area. She presented with persistent vomiting for a period of one and half years. The onset was insidious with a fluctuating course.

Patient was maintaining well until one and half years back and was a below average student in her class when she was scolded by her teacher for not completing her homework. The patient was made to stand outside the class for half an hour. After a while, patient felt dizzy and nauseated. On noticing her discomfort, the patient was sent back to her house. In the same week, the patient reported symptoms of light headedness, churning sensation in stomach and nausea during English period. Gradually, the patient started experiencing these symptoms frequently and more often during school hours. On one occasion post lunch, the patient had nausea followed by vomiting. The patient was given leave for that day. Following these incidents, patient's mother did not send her to school for a week. After a week's time, the patient attended school and realized that she was lagging behind in studies. Patient reported feeling worried. On the day of a test, the patient had vomiting in the morning before starting for school, and she was made to skip school for another week. As she expressed worries related to loss in academics, her elder brother volunteered to teach her at home. It was noticed that patient vomited whenever her brother scolded her. Gradually she vomited at the sight of books, including Quran. As a result, patient stopped going to school. She, though expressed interest in studies but reported that she was unable to look at any books. The informant reported that patient was sent to stay at her aunt's house for a period of 2 weeks during which she was symptom-free. However, the vomiting resumed after coming back home. Patient had two to three episodes of vomiting in a day. She was referred to the Department of Psychiatry for evaluation and management. There were no mood symptoms, no body image concerns, no bingeing or purging episodes and no persistent pervasive worries. Patient was second in order among three siblings. Her father expired four years back due to cardiac arrest and her mother was a housewife. There was no history of psychiatric illness in family. The patient's birth and developmental history was unremarkable. The patient attained menarche at the age of 13 years and had regular menses. The premorbid temperament was slow to warm up. Parents reported that patient hardly went out of home to play and when she did she needed a parent's company. She displayed a lot of discomfort when she was left to stay in elder brother's care. She was able to transition but needed a lot more time.

General physical and systemic examination revealed no abnormality. No history of sexual or physical abuse was found. Affect was euthymic.

Patient was treated with 10 mg of escitalopram and weekly CBT sessions. Within first month of weekly sessions, she was symptom-free. She received once in a week sessions for three months and fortnightly sessions for next one month. Her medications were stopped after first 3 months of therapy. She followed up monthly for three months and her therapy was terminated.

Treatment

Patients were treated with low dose of anti-depressants along with CBT. Given that reported cases of psychogenic vomiting are sparse, there are no specific treatment guidelines for its treatment. To the best of our knowledge, existing literature discusses Cognitive Behavioral Therapy (CBT) and relaxation

techniques for the conceptualization and treatment of emetophobia and psychogenic vomiting (for example Boschen, 2007) [23]. This treatment, although is mostly based on emetophobia; it does provide hints to management of anticipatory anxiety associated with psychogenic vomiting. The individual CBT for all the cases was based on Judith Beck's: Basics and Beyond [24] principles but modified upon borrowing of concepts from Boschen's CBT approach. In general the sessions were carried out along the following phases:

1. Psychoeducation- Educating the patients and parents of the manner in which stress and anxiety elevated the chances of occurrence of vomiting. An explanation about the relationship between stress and gastrointestinal symptoms was offered. This session was aimed at helping patient understand their symptoms, gain a sense of control over stress and vomiting and enhance self-efficacy at symptom management.

2. Self-Monitoring- Patients were asked to self-monitor their symptoms to gain insight into preceding events, mood states, other possible triggers and physiological cues to vomiting. For the purpose of early symptom management, parents were asked to do an environmental control of avoidable stimuli that were obvious precipitants of vomiting.

3. Awareness, Control and Self Efficacy Building- In this phase, we asked the patients to highlight the body parts on a human figure drawing that were associated with vomiting episodes. Patients pointed out sensations in stomach, throat etc. Patients were asked to use these sensations as cues to vomiting episodes and practice relaxation at that moment. Diaphragmatic breathing was taught to patients as a technique for relaxation. This session reiterated the functional nature of vomiting and emphasized the possibility of control over the symptoms. A list of distraction techniques was also developed for each patient to practice in order to manage anticipatory anxiety associated with vomiting.

4. Cognitive Restructuring- Based on the data obtained from the self-monitoring, the vicious circle of unhelpful thoughts, stress, anticipatory anxiety, physiological cues to vomiting, and specific vomiting episode was discussed. The impact of unhelpful thoughts on their symptom and behavior was also discussed. In this phase of treatment, socratic questioning was used to elicit dysfunctional assumptions and cognitive distortions of the patients. The conditioning between maladaptive thoughts and vomiting were interrupted by practicing positive self-talk by patients at home. In this phase, patients carried out behavioral experiments to test their thoughts as well. For example, case 2 ate all meals with family for one full day and found that as opposed to her tendency to catastrophize delay in self-study, she felt more relaxed and concentrated better in studies during the day. Some cognitive distortions that were common to these cases including-all or none thinking, catastrophizing, personalization to list a few. Cognitive restructuring was done in session. Homework assignment to test the validity of thoughts verbally or through was encouraged. The need to practice positive self-talk which was taught in the previous sessions was also emphasized.

5. Broadening self-perception and problem solving skills- We noticed that the subjective self-perception of each of the cases was limited to keeping up a good 'student' image. Pie chart technique was used to help them become more aware of other important parts of their life, functioning and self-image. This helped in reducing the burden to prove to be a good student and diversify one's self-definition.

In the same phase, problem solving skills were imparted to help patients manage stressors effectively.

6. Relapse Prevention- This phase included session with parents and patients. A session was spent on parent training, where behaviors incompatible with patient's illness were discussed. Later, therapist also talked about the patient's vulnerabilities, risk factors and maintaining factors. Skills to manage the risks were imparted and regular follow up visits were planned.

Discussion

This paper discusses the clinical and psychological profile of three cases with psychogenic vomiting. It raises certain diagnostic and nosological issues with regard to the classification of this condition in psychiatry. The paper also attempts to add to the few existing reports. It aims to build an understanding of the condition and to bring out the differences between vomiting with psychogenic origin, CVS and eating disorders.

All patients in this series were female, in the adolescent age group (13-15 years) with recurrent vomiting as chief complaint. This profile is mostly in consonance with earlier studies reporting psychogenic vomiting in the younger age groups [10,11] with female preponderance [12] and an early childhood onset.

Two distinct patterns of vomiting can be discerned from the cases described above. Cases 1 and 3 had vomiting on a daily basis, with 4-5 episodes occurring in a day, separated by only a brief interval. This pattern resembles the continuous vomiting pattern as described by Muraoka and coauthors [13]. Case 2 presented with an exacerbation limited for 1-2 days followed by a completely asymptomatic period lasting for few days. Clinical features of the cyclic vomiting syndrome [3,10] with recurrent stereotypic episodes of severe vomiting separated by baseline is closer to this presentation. In children, an on-off pattern with intervals of returning to complete normalcy or baseline health between episodes is most common [2]. Each of the discrete and self-limited episode may individually vary in severity and duration.

Cases 2 and 3 reported the presence of nausea, churning sensation or cramps in stomach preceding the vomiting episodes. Such a prodrome period is reported in other studies [14]. Personal distress was remarkably absent in all three cases for most part of the illness. The symptomatic management by a physician could brought short lasting relief only, and gradually, the frequency of vomiting, and associated dysfunction progressed over time. Fitzpatrick et al also noted school absenteeism among symptomatic children in their study [14].

In all three cases, academic stress appears to be a noxious trigger for psychogenic vomiting. Perceived academic pressure, stress due to academic aspirations, fear of failure are often seen to be precipitating mental health problems among Asian students especially in girls [11,15]. Interestingly, going back to school was a triggering event in nearly half of the children with cyclic vomiting [10]. Further, family may mediate cultural influences. In case 1 and 3, critical remarks by family over academic performance were important triggering and maintaining factors. For case 2, high self-expectations in academics and pathological behavior like eating packed food, eating alone were acceptable to parents. Besides, vomiting as a somatic symptom was liable to raise the parental concern; increased attention, avoidance of academic pressure and absenteeism was seen to increase.

The current cases raise some pertinent nosological issues. In the existing psychiatric nosology, there is no definite criterion for psychogenic vomiting. It appears as an inclusion term under F50.89 in ICD-10 [17]. All three cases were assessed carefully from the perspective of eating disorders and none met the criteria for eating disorders. None of the cases expressed any concern over body image over the course of illness and management. Psychogenic vomiting as yet it does not find a place in the classificatory system perhaps because the symptomatology is varied with far too few reports discussing the psychogenic vomiting dis-associated from eating disorders. In DSM-5, it gets subsumed under F 98.21 Rumination Syndrome in DSM 5 [18], where it completely loses the association with psychological factors at the core of origin of the disorder. Vomiting in this case series, resolved soon after diagnosis at the out-patient department of psychiatry unit. If the phenomenon is operationalized and is given a place in the classificatory system, the delays in diagnosis and management can be avoided.

Vomiting, especially post-prandial irregular pattern, has also been reported to be associated with depression, and mixed anxiety and depressive disorder [13,19]. Two of the cases, reported depressed affect secondary to increase in vomiting. Case 2 reported irritability and decreased interest in past six months. None of them, however, met the criteria for a syndromal depression or anxiety disorder.

There is a need to let different thoughts contend with respect to symptomatology and diagnosis. The 'emesis' in psychogenic vomiting can be understood as the somatic manifestation of the internal conflict which serves as the primary gain to the patients [18,20]. In cases 1 and 3, the reduction in critical remarks, absenteeism from school, increased attention and gratification of demands were secondary gains. The lack of concern or distress about the vomiting noted in the patients is also previously reported by Wruble et al. It is important to note here that the psychological mechanisms underlying psychogenic vomiting are therefore closer to somatoform disorders [22].

The cases presented here, appear to differ from eating disorders because of clear temporal association with stress, alleviation of symptoms with stress management skills, no dietary restrictions or body image distortions or weight concerns and absence of self-induction of vomiting. Going by Rubin and Guze's criteria [21], psychogenic vomiting has distinct clinical features, exclusion of symptoms of eating disorders, common etiological variables, which mandates distinction of psychogenic vomiting in the diagnostic classification system. Even though, the clinical presentation is similar to that of CVS, a clear association with stress, avoidance of stress leading to a symptom free period, resolution of symptoms with psychological intervention are some reasons that make us think that vomiting due to psychogenic origin is unique. Although, CVS is also known to be a stress sensitive disorder, no definitive conclusions about the pathophysiological mechanisms is available. Some reported cases of CVS, however, have found an association with migraine, cannabis abuse and mutations in mitochondrial DNA [3,4].

To conclude, this paper describes the phenomenon of psychogenic vomiting in three cases seen in a tertiary care hospital setting. There is a paucity of literature emphasizing psychological and psychiatric perspectives. This case series adds that patients suffering from this condition present with clear temporal association with stress, symptom resolution is attained quickly after the stressor is known; often a detailed history is helpful. Biopsychosocial interventions are successful in management of psychogenic vomiting. This phenomenon is worthy of clinical and research attention.

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References

1. Li BUK, Balint J. Cyclic vomiting syndrome: Evolution in our understanding of a brain–gut disorder. *Adv Pediatr*. 2000; 47: 117–160.
2. Levy RL, Olden KW, Naliboff BD, Bradley LA, Francisconi C, Drossman DA, et al. Psychosocial aspects of the functional gastrointestinal disorders. *Gastroenterology*. 2006; 130: 1447-58.
3. Sunku B. Cyclic vomiting syndrome: a disorder of all ages. *Gastroenterology & hepatology*. 2009; 5: 507.
4. Shearer J, Luthra P, Ford AC. Cyclic vomiting syndrome: A case series and review of the literature. *Frontline Gastroenterology*. 2018; 9: 2-9.
5. Makani R, Parikh T. Psychiatric Comorbidities With Cyclic Vomiting Syndrome. *American Journal of Psychiatry Residents' Journal*. 2017; 12: 4-6.
6. Srivastava P, Pattanayak RD, Mehta M. Chronic unexplained vomiting: a case report with focus on issues relevant for international classification of disease (ICD)-11. *ASEAN Journal of Psychiatry*. 2017; 18.
7. Hederos CA. Psychogenic vomiting. *Lancet*. 1992; 339: 1228.
8. Tack J, Talley NJ, Camilleri M, Holtmann G, Hu P, et al. Functional gastroduodenal disorders. *Gastroenterology*. 2006; 130: 1466-1479.
9. Talley NJ. Functional nausea and vomiting. *Aust Fam Physician*. 2007; 36: 694-697.
10. Liao KY, Chang FY, Wu LT, Wu TC. Cyclic vomiting syndrome in Taiwanese children. *Journal of the Formosan Medical Association*. 2011; 110: 14-8.
11. Sax LJ. Health trends among college freshmen. *Journal of American College Health*. 1992; 45: 252-262.
12. Zhao Y, Ke M, Wang Z, Wei J, Zhu L, Sun X, et al. Pathophysiological and psychosocial study in patients with functional vomiting. *Journal of neurogastroenterology and motility*. 2010; 16: 274.
13. Muraoka M, Mine K, Matsumoto K, Nakai Y, Nakagawa T. Psychogenic vomiting: The relation between patterns of vomiting and psychiatric diagnoses. *Gut*. 1990; 31: 526–8.
14. Fitzpatrick E, Bourke B, Drumm B, Rowland M. Outcome for children with cyclical vomiting syndrome. *Archives of disease in childhood*. 2007; 92: 1001-4.
15. Kandemir M. Predictors of academic procrastination: coping with stress, internet addiction and academic motivation. *World Applied Sciences Journal*. 2014; 32: 930-8.
16. World Health Organization. The ICD-10 classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines. World Health Organization; 1992.
17. American Psychiatric Association. Diagnostic and statistical manual of mental disorders (DSM-5®). American Psychiatric Pub; 2013.
18. Talley NJ. Functional nausea and vomiting. *Aust Fam Physician*. 2007; 36: 694-7.
19. Clarke DJ, Salmons PH, Harrison T. Psychogenic vomiting among female Asian migrants to the United Kingdom. *Int J Soc Psychiatry*. 1988; 34: 221-9.

20. Garfinkel PE, Garner DM, Rose J, Darby PL, Brandes JS, O'Hanlon J, et al. A comparison of characteristics in the families of patients with anorexia nervosa and normal controls. *Psychol Med.* 1983; 13: 821-8.
21. Feighner JP, Robins E, Guze SB, Woodruff RA, Winokur G, Munoz R. Diagnostic criteria for use in psychiatric research. *Archives of general psychiatry.* 1972; 26: 57-63.
22. Wruble LD, Rosenthal RH, Webb WL Jr. Psychogenic vomiting: a review. *Am J Gastroenterol.* 1982; 77: 318-21.
23. Boschen MJ. Reconceptualizing emetophobia: A cognitive-behavioral formulation and research agenda. *Journal of anxiety disorders.* 2007; 21: 407-19.
24. Beck JS. *Cognitive behavior therapy: Basics and beyond.* Guilford press; 2011.

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