

CASE REPORT

Conversion disorder with psychogenic vomiting and coexisting organic etiology in an adolescent: A case report



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Introduction

Psychogenic vomiting is an uncommon, often overlooked condition linked to psychosocial stressors, without an obvious organic cause [1]. The most common diagnosis for patients with habitual postprandial or irregular vomiting is major depressive disorder (MDD), whereas conversion disorder is the most common diagnosis for patients with chronic vomiting [1, 2]. Unfortunately, psychogenic vomiting is not well addressed in the Diagnostic and Statistical Manual of Mental Disorders -5th Edition (DSM-5) and International Classification of Diseases-11th Revision (ICD-11), creating diagnostic challenges [3].

This case study examines an adolescent girl with persistent vomiting who, after diagnostic challenges, responded well to psychiatric intervention.

Case description and management

A 13-year-old eighth grader presented to the Department of Gastroenterology at Bangabandhu Sheikh Mujib Medical University following 3 months of recurrent vomiting and fatigue. She started off with infrequent but increasingly frequent episodes of vomiting, which would happen 10-15 times daily, usually in the hours following a meal or drink. The vomitus consisted of freshly consumed food, with no blood or bile, and did not improve with medication. There were no other gastrointestinal symptoms, headache, or weight loss. She had regular menstrual cycles with moderate flow. Her body mass index was

18.6 kg/m², placing her at the 50th percentile. Upon examination, the patient was normotensive, with tachycardia and mild dehydration. There were no signs of skin hyperpigmentation, calluses on knuckles, and tooth erosion. Her neurological examination was normal. Despite consulting multiple specialists, none of the treatments provided significant relief. She was also using salbutamol and fluticasone inhalers for her bronchial asthma, diagnosed five years earlier and currently in remission.

The findings of laboratory testing, such as a complete blood count, electrocardiogram, metabolic panel, and radiographic investigations (including barium swallow), were normal. Endoscopic assessment showed non-specific gastritis. Initial laboratory results showed low adrenocorticotrophic hormone (ACTH) (3.55 pg/ml) and basal cortisol (8.30 µg/dl), with cortisol levels rising to 9.5 µg/dl one hour after ACTH injection. Other hormone reports were normal.

Glucocorticoid-induced adrenal insufficiency, which was discovered upon referral to endocrinology, was probably brought on by her previous use of steroids. The clinician initially ordered hydrocortisone injection; however, this was later changed to oral hydrocortisone. One month later, hydrocortisone was stopped when cortisol levels were 14.32 µg/dl. However, her vomiting persisted, and suddenly, within 24 days of admission, she developed frequent asynchronous limb movements without bladder or bowel involvement. Neurological

Key messages

This case report highlights the diagnostic and therapeutic challenges associated with conversion disorder overlapped with organic causes in an adolescent presenting with psychogenic vomiting. The report emphasizes the importance of early identification and holistic management of conversion disorder, utilizing multi-disciplinary intervention, drugs, psychotherapy, and stress management techniques, based on clinical criteria and psychological assessment.

evaluations identified psychogenic non-epileptic seizures (PNES). Symptomatic treatment offered no improvement.

Despite improvements in adrenal function and gastritis management, her symptoms worsened. This suggested that a complex psychological or functional component may be contributing.

A psychiatry consultation eventually diagnosed her with conversion disorder, presenting with a combination of symptoms according to DSM-5. Psychiatric assessment highlighted preoccupation with illness, feelings of helplessness, and moderate stress, with no significant family history of psychiatric disorders. She never self-induced the vomiting and thought her weight was ordinary. The treatment plan combined pharmacotherapy with supportive psychotherapy, relaxation techniques, stress management, and cognitive restructuring. Psychoeducation was provided to both the patient and her mother. No adverse events were reported during treatment.

After 2 months of treatment, the patient's symptoms improved. She returned to full-time school attendance and demonstrated improved social interactions and emotional well-being. Follow-up sessions confirmed sustained symptom remission.

Discussion

The case report outlines the process of excluding other causes of vomiting through laboratory tests and evaluations. Organic causes were ruled out through gastroenterologist, endocrinologist, and neurologist assessments, with no signs of eating disorders or metabolic conditions in the patient.

Psychogenic vomiting is typified by the following symptoms: nausea in generalized-anxiety disorder, habitual postprandial or irregular vomiting in MDD and mixed anxiety-depressive disorder, self-induced vomiting in obsessive-compulsive disorder, and continuous vomiting in conversion disorder [2, 4], as demonstrated here. The Rome-III criteria distinguishes it from persistent idiopathic nausea, and cyclical vomiting syndrome [1, 5]. Most of the group suffer from a serious mental illness, mainly conversion disorder or MDD [2, 6]. Previous studies align with the finding that psychogenic vomiting often manifests in adolescence and may involve academic stress, perfectionism, and emotional dysregulation [1, 6]. Some patients show more than just emotional difficulties. Vomiting can develop into a habit and be regarded as a learned behavior, even though it may start as an organic or functional problem [2] (Figure 1) [7, 8]. Furthermore, since they may influence treatment choices, metabolic factors should be taken into account [5].

Corticosteroid therapy for asthma may have predisposed the patient to glucocorticoid-induced adrenal insufficiency, contributing to her initial vomiting [9]. This also links to the unstable connection between cognition, emotion, and motor control in PNES, which frequently associates with a range of psychological, psychiatric, and physical symptoms [10]. The interplay between these factors underscores the complex nature of the patient's condition.

This case illustrates the complexity of psychogenic vomiting when associated with other concomitant conditions. Early recognition of psychological influences is crucial for timely and comprehensive management, highlighting the need for a multidisciplinary approach.

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Author contributions

Manuscript drafting and critical revision: TA, SES, ABA. Approval of the final version of the manuscript: NMM, SES. Guarantor of accuracy and integrity of the work: TA, SRJ.

Conflict of interest

We do not have any conflict of interest.

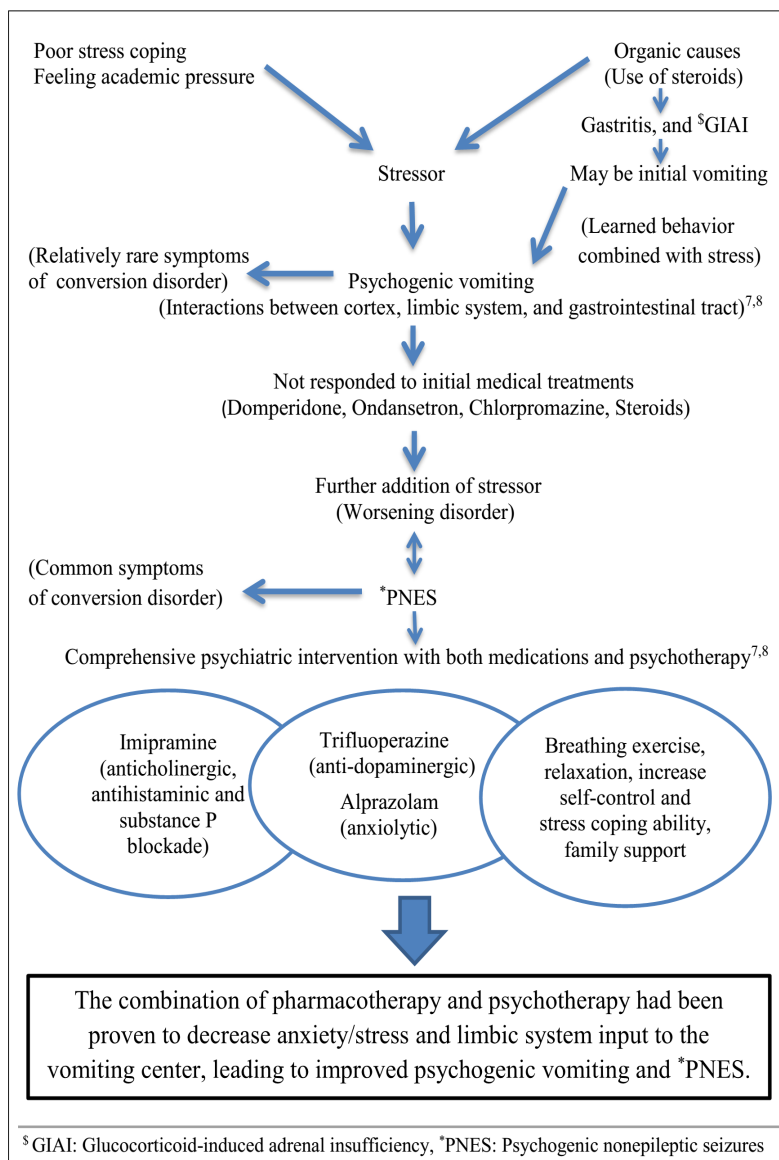


Figure 1 Flowchart of the patient's clinical event

Data availability statement

We confirm that the data supporting the findings of the study will be shared upon reasonable request.

Supplementary file

None

References

1. 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 J Psychiatry*. 2017 18;18:114-118. URL: <https://www.researchgate.net/profile/Paakhi-Srivastava/publication/315653812>
2. Paidi G, Jean M, Oduwole A, Gautam N, Kapoor K, Paidi R.: Chronic unexplained vomiting: A case report on psychogenic vomiting. *Cureus*. 2022;14(6):e25959. doi: <https://doi.org/10.7759/cureus.25959>
3. Ray A, Roy A, Basu A, Sarkar S.: Psychogenic vomiting – A potential transdiagnostic psychological construct: Inferences from case series. *Arch Ment Health*. 2023;24:133-136. doi: https://doi.org/10.4103/amh.amh_126_22
4. Muraoka M, Mine K, Matsumoto K, Nakai Y, Nakagawa T.: Psychogenic vomiting: the relation between patterns of vomiting and psychiatric diagnoses. *Gut*. 1990; 31(5):526-528. doi: <https://doi.org/10.1136/gut.31.5.526>
5. Olden KW, Chepyala P.: Functional nausea and vomiting. *Nat Clin Pract Gastroenterol Hepatol*. 2008;5(4):202-208. doi: <https://doi.org/10.1038/ncpgasthep1094>
6. Pooja V, Gupta N, Khan A, Chaudhury S, Saldanha D. Psychogenic vomiting: A case series. *Industrial Psychiatry Journal*. 2021;30(Suppl 1):S252-S254. doi: <https://doi.org/10.4103/0972-6748.328822>
7. Hsu WY, Huang SS, Chiu NY.: Escitalopram for psychogenic nausea and vomiting: a report of two cases. *Journal of the Formosan Medical Association*. 2011;110(1):62-66. doi: [https://doi.org/10.1016/S0929-6646\(11\)60010-7](https://doi.org/10.1016/S0929-6646(11)60010-7)
8. Fallon R, Fraser C, Moriarty K.: Recommended management of nausea and vomiting. *Prescriber*. 2007;18(20):50-61. doi: <https://doi.org/10.1002/psb.146>
9. Blair J, Lancaster G, Titman A, Peak M, Newlands P, Collingwood C, Chesters C, Moorcroft T, Wallin N, Hawcutt D, Gardner C.: Early morning salivary cortisol and cortisone, and adrenal responses to a simplified low-dose short synacthen test in children with asthma. *Clin Endocrinol (Oxf)*. 2014;80(3):376-383. doi: <https://doi.org/10.1111/cen.12302>
10. Van der Kruijs SJ, Bodde NM, Vaessen MJ, Lazeron RH, Vonck K, Boon P, Hofman PA, Backes WH, Aldenkamp AP, Jansen JF.: Functional connectivity of dissociation in patients with psychogenic non-epileptic seizures. *J Neurol Neurosurg Psychiatry*. 2012;83(3):239-247. doi: <https://doi.org/10.1136/jnnp-2011-300776>