

CASE REPORT

Cyclic vomiting syndrome in a 27-year-old male: A case report

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Abstract

A 27-year-old man presented with post-meal chest tightness followed by vomiting for 3 years. With a multidisciplinary approach, he was labeled as cyclical vomiting syndrome and treated with pharmacotherapy, psychotherapy, and lifestyle modifications.

KEY WORDS

abdominal migraine, Bangladesh, case report, chest tightness, cyclic vomiting syndrome

1 | INTRODUCTION

We report a 27-year-old man with post-meal chest tightness followed by vomiting for the last 3 years. His all routine and special investigations were normal. With a multidisciplinary approach, he was labeled as a case of cyclical vomiting syndrome and treated with pharmacotherapy, interpersonal psychotherapy, and some lifestyle modifications.

Cyclic vomiting syndrome (CVS) is an emerging clinical entity that has not been reported in many countries of the world. Although it was first identified in 1,806 in France, there is a dearth of research exploring its epidemiology, clinical presentation, management, and prognosis.¹ Usually, it is characterized by recurrent severe vomiting separated by a long asymptomatic period.² It is commonly found in children even though, nowadays cases have also been reported in young adults.^{1,2} The incidence of CVS was reported 3.15 per 1,00,000 in a study of 1,647 participants conducted in Ireland.³ Studies revealed various gender distribution across the countries.^{2,4} The exact pathogenesis is still unknown; however, studies show that it is associated with psychological stress, improper sleeping, foods (like

monosodium glutamate, chocolate, cheese), phobia, fasting, infection, and use of various recreational drugs could act as the triggering factors.^{1,2} Sometimes it may co-exist with migraine. However, many times the cases have been labeled as food poisoning, gastrointestinal reflux disorder (GERD), gastroenteritis, and neurological disorders that herald unnecessary delay in diagnosis.⁵ A familial history of migraine has been identified in previous studies.⁶ The vomiting episodes can be stereotypical for an individual patient, in regards to onset, duration, and vomiting pattern; however, that may vary from patient to patient.⁷ It usually starts before 5 years of age, and girls are more affected than boys.⁸ An autonomic dysregulation, dysmotility of the intestine, mitochondrial DNA polymorphisms, and increased adrenocorticotropin releasing factors are the hypothesized causal factors.⁶ A prudential inquisitiveness for the diagnosis of CVS could save many efforts while the repeated investigations are normal and medications are ineffective. With proper pharmacological therapy and lifestyle, modification the patient can lead a normal life. Here, we aim to report a case of CVS in Bangladesh that would act as the baseline report on the disease in the country.

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2 | CASE DESCRIPTION

A 27-year-old average body built normotensive, non-diabetic, non-asthmatic policeman visited the psychiatry out-patient department (OPD) with complaints of post-meal chest tightness followed by vomiting for the last 3 years. He develops chest tightness for about 10–15 minutes after every meal, becomes restless in the pre-emetic phase, and then he vomits. Initially, the episode of vomiting was used to occur once or twice a month and gradually he vomits on daily basis after every meal. The vomiting is non projectile, non-bilious with less mucous content and the vomitus contains undigested food particles. There is no history of hematemesis, no malena. His food habit is normal and culturally appropriate. He is non-alcoholic, non-smoker, and non-drug abuser. However, he gives a history of taking cannabis for a single episode that gave him an unpleasant experience. His childhood reveals normal and there is no history of psychological trauma during the childhood. He has no history of headaches and aura. He has also no family history of migraine. However, his sleep is disturbed and inadequate due to the frequently altered day-night shift duty of his job. He has consulted with numerous consultants and undergone all the most possible routine and special investigations that revealed nothing contributory to the disease. He was hospitalized for diagnosis and further management. We considered migraine, temporal lobe epilepsy, and brain pathology as differential diagnoses. During his hospital stay, we explored his all domains of life, performed all routine and necessary specialized investigations such as computed tomography (CT) of the abdomen, and magnetic resonance imaging (MRI) of the brain. Again his all investigation reports were normal. During the hospital stay repeated mental state examination (MSE) revealed no diagnosable disorder, however, he was found anxious. Subsequently, a medical board was arranged consisted of a psychiatrist (first author), gastroenterologist, neurologist, neurosurgeon, internal medicine specialist, and endocrinologist to diagnose the case. He was assigned the diagnosis of CVS and prescribed carbamazepine 600 mg daily in divided dose, escitalopram oxalate 10 mg in the morning, and propranolol 20 mg three times daily on basis of the medical board comments. He was suggested taking frequent small meals while avoiding larger ones and regular physical exercise. We suggested and trained him in breath-holding relaxation exercises. As the patient developed chest tightness and vomiting after taking the meal, we provided unstructured inter-personal psychotherapy to distract his mind from the domino. During his 1-week hospital stay, he had no episodes of vomiting and discharged to home for further follow-up. A 6-month follow-up revealed that the patient was completely fine and leading a normal healthy life. During this period, the patient has been taking the suggested medications, maintaining sleep hygiene, doing physical, and breath-holding relaxation exercises. However, inter-personal psychotherapy was stopped.

3 | DISCUSSION

The diagnosis of CVS could be challenging and time-consuming because of its lower frequency of presentation and chances of mislabeling. Here, we report a case of CVS in Bangladesh. The 27-year-old policeman had symptoms of chest tightness followed by vomiting for the last 3 years. After extensive assessment, he was labeled as a case CVS and treated with carbamazepine, escitalopram oxalate, and propranolol. With pharmacotherapy, inter-personal psychotherapy, and lifestyle changes, the patient was found symptom-free after a 6-month follow-up.

Our case has a distinct characteristic mentioning as chest tightness preceded the vomiting. We reviewed his all previous documents of consulting numerous physicians covering several specialties and arranged a multidisciplinary board. It is important to note that the patient was not hospitalized previously, and no multidisciplinary approach was initiated earlier. We considered several points while arranging the multidisciplinary board such as the differential diagnoses, availability of the consultants, and the explainable pathophysiology of the symptoms. It should be considered that arranging such a multidisciplinary approach in countries like Bangladesh is challenging. As he was admitted to tertiary care private hospital, we were able to manage that. However, we had pressure to do the steps quickly due to the out-of-pocket expense burden of the patient. Moreover, after suffering 3 years with numerous consultations and medications, the patient had a low hope to be improved. We suggest that a multidisciplinary approach could reduce the sufferings of patients in the CVS like trans-disciplinary areas as happened in our case who was suffering for the last 3 years.

We considered migraine as a differential diagnosis as some authors consider CVS as abdominal migraine or there is an association with migraine. However, there is no other history and symptoms supporting migraine.^{8,9} Also, there are no other autonomic symptoms supporting temporal lobe epilepsy, and neuroimaging (MRI) revealed no abnormality. Subsequently, we labeled the case as CVS.

A similar case of CVS in a 10-year-old girl was reported in Sri Lanka, where the investigations revealed normal.¹ There was no psychiatric morbidity, however, the girl was found anxious.¹ The girl was suffering for 1 year. Another case of 27-year-old woman was reported in 2020 in Oman, who was suffering for 7 years.⁵ These reports indicate that an undue longer duration has been lapsed to diagnose this disease. A study of 17 CVS patients revealed the mean age was 29.8 years and 13 (76.5%) of the cases were female.¹⁰ In the study, five patients were cannabis abusers, and the times needed for the diagnosis ranged from 5 months to 15 years.¹⁰ Amitriptyline was started in 14 (82.3%) patients and symptoms either stopped or improved in eight (57.1%) of the cases.¹⁰ Tricyclic antidepressants (TCAs) have been recommended as the first-line drugs for the prevention of CVS

despite the anti-cholinergic side effects.¹¹ Previous recommendations mentioned that Amitriptyline should be started at a lower dose such as 10 mg followed by up-titration to approximately 100 mg/night in the case of adult patients.¹¹ Another recent case report revealed nebivolol as an effective treatment option for CVS in adults.¹² A study reporting the 41 adult cases of CVS revealed that 70% of the cases had migraines and 57% of the cases had a first-degree or second-degree relative with migraine.¹³

In our case, we chose escitalopram oxalate instead of amitriptyline due to the shifting duty of the patients. We considered propranolol as a prophylactic for migraine and we advised carbamazepine for temporal lobe epilepsy. Also, previous studies revealed beta-blockers, antimigraine drugs, and antiepileptic have been used as prophylaxis to treat CVS.^{6,10,14} Certainly, it raised the issue of polypharmacy. However, we considered stabilizing the patients initially and then tapering the medication as the diseases was a new experience to us.

Existing literature revealed that the prevalence of CVS is 0.5% despite there is an extreme dearth of empirical and interventional studies. Usually, it presents with stereotypical symptoms of acute episodic nausea and vomiting with a symptom-free period.⁶ During an acute presentation, symptomatic and supportive management with rehydration, sedation, and antiemetics is necessary to reduce the immediate anxiety.⁶ Prevention of further attacks should have a consideration of management with antihistamines, antimigraine drugs, antiepileptic, and TCAs as prophylactics.⁶ Lifestyle modifications such as cessation of cannabis, good sleep hygiene, physical exercise, and avoiding triggering foods should be advised.⁶ With a combination of pharmacotherapy, psychotherapy, and lifestyle modification, a follow-up after 6 months revealed a complete remission in our patient.

4 | CONCLUSION

To the best of the authors' knowledge, this is the first reported case of CVS in Bangladesh which would create awareness about the trans-disciplinary entity among the clinicians so that the early diagnosis and treatment could be ensured.

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None

CONFLICTS OF INTEREST

The authors declare that they have no conflict of interest to report.

AUTHOR CONTRIBUTIONS

SMYA: involved in conception, data collection, and writing. FM, SG, and IP: involved in data collection and paper writing.

ETHICAL APPROVAL

Informed written consent is taken from the patient.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

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