

# Intractable Vomiting: A Cry for Help; Case Report

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## ABSTRACT

Chronic nausea & vomiting with no apparent cause has been described as functional vomiting. Dearth of information regarding its presentation especially in children/ adolescents points towards the need for further research. This case report highlights the importance of detailed history & examination to arrive at final diagnosis which will aid in choice of appropriate treatment strategy.

**Key words:** vomiting, intractable, adolescent

## INTRODUCTION

Functional vomiting (FV) also known as “psychogenic”, “nervous” or “hysterical” vomiting was defined by Leibovich as vomiting without any obvious organic pathology, resulting from psychological disturbances. <sup>(1)</sup> It finds a mention under Eating disorders in ICD-10 as Vomiting associated with other psychological disturbances (F50.5), but lacks a diagnostic category in DSM-5. Apart from eating disorders, functional vomiting could be a presenting symptom in dissociative-conversion, depressive, somatoform, hypochondriac, anxiety, panic, obsessive-compulsive or psychotic disorders. <sup>(1-4)</sup> Psychogenic vomiting was further classified into 5 patterns by Muraoka et al as continuous, habitual postprandial, irregular, self-induced, & nausea; of which continuous vomiting being the most common pattern, is characterised by recurrent vomiting, consisting of food remnants initially, changing entirely to saliva, gastric juice or bile & reducing to a very small amount. <sup>(1)</sup> Despite being significantly described in literature under

various captions, paucity of data regarding its etio-pathophysiology, epidemiology & definitive assessment guidelines, makes its diagnosis & management challenging. <sup>(4)</sup> This dearth of information necessitates further research to explore the psychological mechanisms involved & to elucidate its clinical correlates with respect to Indian context, especially in children & adolescents. Rarely, high index of suspicion towards possible psychological cause, might lead to timely psychiatry referral that would help in appropriate management. <sup>(5)</sup> Here we present an adolescent girl with continuous intractable vomiting, cause of which remained obscure, even after repeated inconclusive, yet extensive laboratory & radiological (including invasive) work-up. A longitudinal history addressing the bio-psychosocial factors, unveiled the obscure cause, helped in clinching the diagnosis and hence relieved the patients of her symptoms.

## CASE REPORT

17 year old girl, studying in 12<sup>th</sup> standard, belonging to a rural nuclear family, staying at college hostel since 1 year for educational purposes, presented to Medical out-patient service in June 2019 with complaints of recurrent episodes of continuous vomiting since 6 months (Dec 2018). It was characterised by 16-20 episodes/day of vomiting, minimal in quantity (about 1 table spoon), watery in consistency, containing ingested food particles & saliva, occurring usually after food or water intake.

It was non-blood/bile stained, non-projectile & not associated with fever/

burning sensation in the epigastrium/ pain abdomen/ diarrhoea/ constipation/ abdominal distension/ headache/ photophobia/ phonophobia/ osmophobia/ premonitory symptoms/ loss of appetite/ loss of weight/ burning micturition/ diminution of vision/ vertigo. It was not associated with any specific type of food intake. There was no history of food allergy or motion sickness. She reports of having no voluntary control over the act, vomiting was effortful & associated with watering of eyes. Her menstrual cycles were regular & there was no pre-menstrual exacerbation.

Her general physical examination showed normal vitals, BMI of 23.8kg/m<sup>2</sup>, absence of signs of dehydration or dental caries/ parotid abscess/ knuckle callosities. Systemic examination (inclusive of fundoscopy) was normal. Laboratory investigations revealed normal findings: hemogram (Hb-12.3g/dl, Total counts-11,600/mm<sup>3</sup>, ESR-11mm/1st hour)/ liver, renal (serum potassium- 4.35mEq/L) & thyroid function tests/ serum cortisol (161IU/L)/ RBS (81mg/dl)/ serum prolactin, beta-HCG / Urine routine (no ketone bodies). Urine pregnancy test was negative. Repeat imaging studies were inconclusive with ultrasound of abdomen showing small left ovarian simple cyst, normal findings on upper GI endoscopy, EEG & MRI Brain. When the extensive work-up had ruled out metabolic & neurological causes for her continuous vomiting & a psychiatry reference was sought.

After establishing good rapport with the patient, she revealed that about a year ago, for the first time she had moved out of home & had begun staying at her college hostel. She reported to have joined a college in a distant city as she couldn't secure admission in nearby city due to her average scores in 10<sup>th</sup> standard. She & her family expected her to score better marks in 12<sup>th</sup> standard so that she could secure admission for graduation in a city closer to her home.

She had comfortable stay at college & hostel for the initial few months. Around December 2018, she reports of noticing

difficulty in understanding Business subject merely from the notes provided for self-study with the lack of formal teaching, in spite of devoting more time on the subject & hence had begun to worry regarding her exam performance. This coincided with her symptom onset.

The frequency of episodes were more at hostel (after food intake/ while washing clothes/ bathing) than during class or study hours. In spite of significant number of episodes of vomiting per day, there was no significant functional decline: she was regular to classes, was able to concentrate in class, maintained adequate personal care & biological functions were normal. Episodes decreased to 4-5 episodes/day when at home for 3 days during holidays & worsened again on returning to hostel.

On further probing, she revealed of having no close friends in her new college but had maintained cordial relationship with classmates & roommates until below mentioned happenings had caused her distress & strained her inter-personal relationship with roommates:

- i) Her roommates bringing non-vegetarian food to hostel room which was against hostel rules & against her vegetarian food preferences.
- ii) In the next semester, when she had 2 new roommates (who were best friends from their school time), our patient reports to have felt separated & left out & found it difficult to bond with them. Once they had left her to sleep, instead of waking her up for morning class, when she forgot to keep alarm & had to miss class.
- iii) Difference in idea of cleanliness: they would take bath only once a day & would wash clothes improperly causing clothes to smell bad.

Following this, our patient reported to have (avoidance) spent maximum time at library, would come back to her hostel room

only to sleep, during which she would keep all the windows open so as to wade off the smell.

Few culturally accepted, rigid patterns of behaviour pointing towards pre-occupation with fear of contamination, that she continued to follow since her childhood days include:

- i) Preference to eat in one's own plate, avoids sharing utensils with non-vegetarians; if at all they use it by mistake, she needs to wash it prior to using it again. However, reports that family members/ vegetarians sharing food from her utensils is acceptable.
- ii) Preference to eat in pure-vegetarian restaurants
- iii) Doesn't approve of non-vegetarians taking food from her plate with their eating hands
- iv) Need to clean the washroom with water once, prior to her use, even at home

Her mother reported that patient had often voiced her inability to adjust to hostel food, where she said that rice would be undercooked & food would be spicy. However, no history of similar complaints in other hostel mates was reported. On learning about the symptoms, parents had taken the patient home & for consultation with multiple physician in view of persisting symptoms. Secondary gain from sick role-relieved her from feeling of being trapped & the resultant decrease in number of episodes of vomiting at home.

There was no excessive concern regarding her body habitus nor the signs of self-induced vomiting/ compulsive exercise, excluded eating disorders. With the absence of alternating symptom-free period & the absence of particular trigger for each episode, Cyclical vomiting syndrome was excluded. Absence of associated abdominal pain, personal or family history of migraine excluded abdominal migraine. There were associated sympathetic signs of effortful vomiting such as watering of eyes & flushing which excluded the possibility of rumination/ regurgitation. She denied being controlled or instructed to do so by an

external agency hence ruling out psychotic symptoms. There was no history of substance use, associated depression or anxiety symptoms or food allergy.

In the past, at 10 years of age, when her father was hospitalized following an accidental head injury, patient had similar episode of recurrent vomiting lasting for 15 days, 60-70 episodes/day, each of minimal quantity, watery consistency, non-bile stained, non-blood stained which resolved with oral proton-pump inhibitors & anti-emetics taken for 1 week.

She had a normal birth & developmental history with average academic performance till 10<sup>th</sup> standard. She was a slow to warm child, with only a few close friends with whom she shared a good bonding. Coping with exam stress in the past was adequate. There was no family history of chronic vomiting/ migraine headache/ abdominal migraine. She also had cordial inter personal relationship with her family members. She had specific interest in music & regional folk dance-drama. Concern regarding the safety of Parents & other close relatives (whom they were financially dependent on), especially when there is delay in returning back home & would pray for their safety. These worries were more frequent after she had begun staying at hostel. Low self-esteem due to her poor academic performance as compared to her younger sibling. Adequate frustration tolerance. No h/o previous DSH attempts/ threats.

At 5 years of age, she had sustained a road traffic accident (RTA) with head injury during which she was prophylactically started on anti-epileptics which was gradually tapered over 6 months. Following RTA, decline (from above average to average) in her scholastic performance was noticed by the Mother. However, her IQ assessment showed average level of intelligence & normal results on neuropsychological assessment.

## DISCUSSION

Detailed history, inclusive of her pre-morbid temperament, coping skills, peer group problems & educational stress, family functioning. <sup>(2, 4)</sup> assisted us in arriving at the diagnosis by ruling out similar appearing conditions.

As described by Hill, <sup>(6)</sup> her symptoms were a cry for help as she felt “trapped in a hostile relationship” with her roommate against whom she had a passive & ambivalent approach. Also, the short term benefits received during similar episode of recurrent vomiting in childhood were acted as reinforcers & made vomiting into a learned behaviour. <sup>(1)</sup> To protect herself from the unresolved psychological conflict she expressed physical symptoms of recurrent vomiting, thereby gaining social acceptance. <sup>(7)</sup> Violation of rigid, inflexible culturally accepted patterns of self-belief, <sup>(8)</sup> caused the psychological conflict.

Our patient had,  $\geq 1$  vomiting episodes per week, persisting for  $\geq 2$  months (as per ROME IV criteria), with no evidence of organic, systemic or metabolic disease that is likely to explain the symptoms & having ruled out self-induced vomiting, eating disorders, regurgitation or rumination with the presence of significant psychosocial stressors with temporal correlation paved the way for our diagnosis of Functional vomiting in this case. <sup>(6-9)</sup>

She was started on small dose of Escitalopram. She was also initiated on insight-oriented family focussed cognitive behavioural therapy including patient psychoeducation to improve insight, family psychoeducation to decrease secondary gain & alleviate stress, ventilation, addressing the stressors & strengthening healthy coping skills, thereby helping in relapse prevention. On follow-up she reported of significant reduction in episodes of vomiting to 2-7/day. She has been maintaining thought antecedent-behaviour-consequence diary to seek further assistance during her sessions for CBT.

Psychological factors & stress modulate the brain-gut axis, by altering the

gut-related autonomic nervous system function & processing of visceral sensation, hence affecting gut motility and sensation which in turn influence the integrating areas in the CNS that overlap with regions involved in emotional regulation, thereby affecting the clinical presentation and outcome. <sup>(4,9)</sup> Effective role of Escitalopram may be due to its pharmacological effects on the limbic system, low affinity in upper GIT serotonin receptors. <sup>(3)</sup> Treating physician with a knowledge of FV, gets directed towards the right approach to assessment & management & hence alleviates the stress in patient & their families with a plausible explanation for their symptoms. <sup>(5)</sup>

## CONCLUSION

This case report points towards the need for detailed evaluation of patient with history regarding the episodes of vomiting, triggers, maintaining factors, psychosocial factors & physical as well as radiological examination, prior to arriving at a diagnosis. Further research to define specific guidelines for diagnosis & evaluation & a timely psychiatric referral will evade the psychological trauma due to the delay in diagnosis & the financial burden due to the repeated extensive work up, for the patient & their family members.

### Declaration of Patient Consent:

The authors certify that they have obtained all required patient consent forms. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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