



Cyclical Vomiting Syndrome

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ABSTRACT: Cyclic vomiting syndrome is characterized by episodes of severe vomiting that have no apparent cause. Episodes can last for hours or days and alternate with symptom-free periods. Episodes are similar, meaning that they tend to start at the same time of day, last the same length of time, and occur with the same symptoms and intensity.

Cyclic vomiting syndrome occurs in all age groups, though it often begins in children around 3 to 7 years old. Although it's more common in children, the number of cases diagnosed in adults is increasing.

The syndrome is difficult to diagnose because vomiting is a symptom of many disorders. Treatment often involves lifestyle changes to help prevent the events that can trigger vomiting episodes. Medications, including anti-nausea and migraine therapies, may help lessen symptoms.

CVS (NORD-National Organization for Rare Disorders)

KEYWORDS: adult cyclic vomiting syndrome

- abdominal migraine
- childhood cyclic vomiting
- CVS
- cyclical vomiting
- periodic syndrome

I. CASE REPORT

68 yr old lady presented with a year history of periodic vomiting which can happen every 5-6 weeks. She gets nausea and vomiting which last for only for a few hours and then she is back to normal. Her liver enzyme test are raised during these episodes including gamma GT and in a week or so they return to normal once the sickness settles.

Her OGD was normal, CT scan abdomen and pelvis did not show any GI problems. Liver screen investigations were normal. She doesn't smoke and doesn't drink alcohol. No family history of any significant illnesses.

The main treatment is going to treat her symptoms. She was advised to take Cinnarazine when she gets these episodes.

General Discussion

Cyclic vomiting syndrome (CVS) is an uncommon disorder affecting both children and adults and characterized by recurrent, episodes of severe nausea and vomiting. An episode may last for a few hours to several days and then is followed by a period of time during which affected individuals are free of severe nausea and vomiting. This alternating pattern of disease and disease-free periods distinguishes cyclic vomiting syndrome from other gastrointestinal disorders. Also, in cyclic vomiting syndrome, within each sufferer the episodes are similar to each other. The associated nausea and vomiting can be severe enough to incapacitate the individual who may be unable to walk or talk and/or be bedridden. Additional symptoms often present during an episode include dizziness, paleness of the skin (pallor), lack of energy (listlessness), abdominal pain and headaches. Oftentimes, nausea is the most disturbing symptom, more so than vomiting. In some cases as children grow older, they outgrow these episodes, but many eventually develop migraines. Cyclic vomiting syndrome may affect children more often than adults. The exact cause of cyclic vomiting syndrome is unknown.

Epidemiology

- This condition is more common in children, although it can present in adulthood.
- The true incidence of this condition is unknown. It is rare and thought to occur in around 3 out of 100,000 children although its true incidence may be greater than this.^[1]
- The average age of first presentation is 5 years.
- Females are affected slightly more than males.

Aetiology

- There is no known cause for this condition.
- It is more common in those who have migraines; around 80% of children and 25% of adults who develop CVS also have migraines.^[2]
- There is an overlap between CVS and abdominal migraine. Some research has



suggested that this syndrome is a condition related to migraine.

- This condition is more common in those people with a family history of migraine.
- The pathogenesis of this syndrome is likely to be multifactorial, with multiple genetic, autonomic, central and environmental factors playing a role.
- This condition appears to belong to a spectrum of cyclical disorders which may have a genetic link.^[3]

Presentation

- The clinical features of this syndrome resemble those found in association with migraine headaches.
- The main symptoms are severe nausea and sudden vomiting which can last from a few hours to a few days.
- There are four phases of the cycle - prodromal, vomiting, recovery and well phases.
- The prodromal phase can often be marked by intense sweating and nausea. The person may also look very pale. This phase generally lasts from a few minutes to several hours.
- The vomiting phase then follows which can last from hours to days. Nausea, vomiting and retching last for 20 to 30 minutes at a time.
- The recovery phase begins with cessation of vomiting and retching, improving appetite and return of energy.
- The final phase of this illness is a phase of wellness when the patient is symptom-free.
- The following symptoms may also occur:
 - Lack of appetite
 - Abdominal pain
 - Diarrhoea
 - Dizziness
 - Photophobia
 - Headache

The severity of episodes varies between cases. The episodes tend to start at the same time of day, last the same length of time and occur with the same symptoms and level of intensity. Some people even need hospital admission during episodes.

The following may trigger an episode:

- Emotional stress.
- Anxiety.
- Infections, especially sinusitis.
- Certain foods (eg, chocolate, cheese, monosodium glutamate).
- Having long periods of time without food.
- Dehydration.
- Hot weather.

- Menstrual periods.
 - Excess exercise.
 - Sleep deprivation.
- Following an episode the patient is symptom-free for several weeks or months.

Diagnosis^[4]

In children

For a diagnosis to be made in children the following criteria need to be met:

- At least five episodes, or a minimum of three over a six-month period.
- Episodic attacks of intense nausea and vomiting lasting one hour to ten days, occurring at least one week apart.
- Stereotypical pattern and symptoms in the individual patient.
- Vomiting during episodes occurring at least four times an hour for at least one hour.
- A return to baseline health during episodes.
- Symptoms cannot be attributed to another disorder.

In adults

For a diagnosis to be made in adults the following criteria need to be met:

- Stereotypical episodes of vomiting regarding onset (acute) and duration (less than one week).
- A minimum of three discrete episodes in the preceding year.
- Absence of nausea and vomiting between episodes.
- No metabolic, gastrointestinal, or central nervous system structural or biochemical disorders.

Differential diagnosis

This includes:

- Gastroesophageal reflux disease.
- Gastritis, duodenitis.
- Crohn's disease.
- Ulcerative colitis.
- Migraines.
- Acute intermittent porphyria.
- Addison's disease.
- Diabetes mellitus with ketoacidosis.
- Phaeochromocytoma.

Investigations

- The diagnosis is usually made clinically.
- CVS should be considered in any child who has repeated episodes of vomiting with periods of wellness between episodes.^[1]
- Investigations may be undertaken but these are usually to exclude any underlying conditions. These may include FBC, renal function, LFTs, gastroscopy and abdominal ultrasound.



- A pregnancy test may be considered for some older girls and women.

Management

The following treatment strategies are used:

- Avoidance of triggers - eg, certain foods, stress, sleep deprivation, avoiding dehydration.
 - Prophylactic and abortive therapy.^[5]
 - Preventative medications are usually considered for those patients with more than one episode a month.
 - Prophylactic treatments include amitriptyline, propranolol and topiramate.
 - Medications used for aborting acute episodes include ondansetron, prochlorperazine and triptans.
 - The addition of erythromycin to standard propranolol treatment has been shown to improve the response to treatment in children.^[6]
- Supportive care during acute episodes - eg, intravenous fluids, analgesia.
- Family support.

NB: assessment and treatment of anxiety in children and adolescents with CVS may have a positive impact on health-related quality of life.^[7]

Prognosis

- Full recovery is usual in the majority of cases.
- Dehydration can occur in more severe or prolonged cases.
- Oesophagitis or a Mallory-Weiss tear can occur due to the excessive vomiting.
- Tooth decay can occur in some cases.
- Most cases resolve in late childhood or early adolescence.
- Around half of children with this condition develop migraines when they are older.^[8]
- Parents and children with CVS have lower health-related quality of life compared to those children with irritable bowel syndrome.^[9]

Prevention of further episodes

This is not always possible. However, the following should be recommended to patients:

- They should have adequate sleep and avoid exhaustion.
- Any stress or anxiety should be addressed and managed.
- Foods that trigger episodes should be avoided.
- Medications used for migraine prophylaxis can be beneficial for some cases.

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