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Cyclic Vomiting Syndrome

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Cyclic Vomiting Syndrome (CVS) was first described by the English physician Samuel Gee in 1882. Although it was initially thought to be a pediatric disorder, CVS has increasingly been seen in adults over the last few years.

Cyclic Vomiting Syndrome is one of over twenty Functional GI disorders (FGIDs). These are disorders of the GI tract which are characterized by abnormal functioning, related to abnormal motility, increased sensitivity and/or dysregulation between the brain and the GI tract. These disorders are diagnosed based on the symptoms and other characteristics the patient may be experiencing (similar to how migraine headaches are diagnosed). The Rome III diagnostic criteria for Cyclic Vomiting Syndrome are outlined in Table I.

Table I Rome III Criteria for Adult Cyclic Vomiting Syndrome

Must include all of the following:

1. Stereotypical episodes of vomiting regarding onset (acute) and duration (less than one week)
2. Three or more discrete episodes in the prior year
3. Absence of nausea and vomiting between episodes

* *Supportive Criterion:* History or family history of migraine headaches

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CVS is divided into four distinct phases: the first of the four phases is characterized by a **well phase** where the person is without symptoms. This is followed, in a fairly predictable way, by a **pre-emetic** (prior to vomiting) phase characterized by pallor, intense sweating and intense nausea. This is then followed by a phase of **intense vomiting** (up to 20-30 vomiting episodes per day) which can last anywhere from 1-4 days or, in some cases, longer. Finally, there is the **recovery phase** where the patient's vomiting decreases, the nausea improves, and the patient is able to take in liquids by mouth. This recovery phase is often characterized by intense hunger and increased alertness, in contrast to the somewhat lethargic state seen during the acute vomiting phase.

The exact mechanism of CVS is unknown. A number of interesting findings have been identified and have been associated with the disorder. These include an association with abdominal epilepsy, an association with abdominal migraine, and the possibility that CVS may be associated with a metabolic disorder called mitochondrial dysfunction. In addition, symptoms consistent with panic attacks, the frequent use of hot showers or baths to lessen symptoms, and frequent marijuana use have been associated with CVS.

Abdominal epilepsy, and especially childhood epilepsy, has been considered as a possible cause of CVS. One study (Ref. 1) studied 900 epilepsy patients, 24 of whom had vomiting during seizure activity. Investigators in this study concluded that CVS did ***not*** represent an epileptic related disorder.

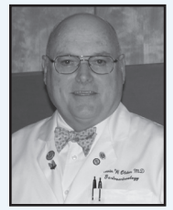
The association of CVS and migraine headaches, particularly with CVS in childhood, raises the possibility of CVS being a migraine equivalent. This is particularly interesting given the fact that drugs commonly used to prevent migraines, including some anti-convulsants and antidepressants, also are helpful in CVS. However, the CVS/migraine association is mainly true in childhood and less so in adults. Furthermore, most CVS patients have no headache symptoms. These facts make the likelihood that migraines are related to CVS less likely.

Panic-like symptoms are commonly seen in CVS patients. In our experience, approximately 60% of CVS patients have panic-like symptoms. More importantly, treating the panic with antidepressants and benzodiazepine therapy can relieve CVS symptoms (Ref 2). There is still work that needs to be done in this area. Interestingly both CVS and panic disorder have been noted to activate certain areas of the brain.

Dysfunction of mitochondria (a part of cells associated with energy) has been noted in pediatric CVS patients (Ref 4). Low levels of a specific chemical, L Carnitine, have been found in patients with both migraine and childhood CVS. This suggests a connection between mitochondrial dysfunction and CVS (Ref 5.)

Cannabis (marijuana) use is frequently seen in adults with CVS. These patients often report that they take cannabis to relieve symptoms of nausea and vomiting. However, what is frequently seen in CVS patients who are using large amounts of cannabis to treat their severe nausea and vomiting symptoms is worsening of these symptoms. It is now known that, although cannabis improves nausea and vomiting at low doses, higher doses actually worsen nausea and vomiting. This suggests that cannabinoid receptors in the body may be involved in CVS, however, their precise role remains to be determined.

In summary, a number of possibilities exist to help explain the perplexing and highly disabling disorder know as Cyclic Vomiting Syndrome. Further work is needed to help improve treatment and to provide validation of the treatments which we are currently using. CVS patients suffer greatly from this disorder.



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Dr Olden received his Medical Degree from the State University of New York Downstate: Brooklyn, NY with additional training at UCLA-San Fernando Valley Medical Program; Harvard Medical School; Massachusetts General Hospital; and Stanford University School of Medicine. His research and clinical interests include Functional gastrointestinal and motility disorders; hepatitis C psychosocial aspects and treatment; psychosocial aspects of liver transplantation; psychological and psychiatric aspects of endoscopy; psychiatric co-morbidity in GI practice and liver treatment; psychiatric aspects of liver transplantation; management of patients with refractory functional gastrointestinal disorders; management of patients with combined medical and psychiatric disorders; doctor-patient communication; medical education.