SYMPTOMATIC MANAGEMENT OF A CHILD WITH CYCLIC VOMITING SYNDROME

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Introduction:

Cyclic vomiting syndrome is a disorder characterized by episodes of idiopathic vomiting alternated with periods of no symptoms. This syndrome mostly affects children but can occur in adults as well. The DSM-IV and DSM-5 do not acknowledge this specific syndrome, but the ICD-10 does. Cyclic vomiting syndrome is defined as a functional gastrointestinal disorder according to the Rome III criteria. These diagnostic criteria contain the following items: (1) stereotypical episodes of vomiting regarding onset (acute) and duration (less than 1 week), (2) 3 or more discrete episodes in the prior year, and (3) absence of nausea and vomiting between episodes. According to the Rome III criteria, all 3 criteria must be met. A supportive criterion is a history or family history of migraine headaches, as cyclic vomiting syndrome may be considered a migraine variant.

Case Report:

In our outpatient clinic, we met a 15-year-old boy with a second episode of acute refractory vomiting with no preceding factors or stressors. The patient achieved his developmental milestones at normal ages and grew up in a stable, middle-class family consisting of his parents and a younger sister. The first episode of (retrospectively: cyclic) vomiting started in 2016 after an episode of gastroenteritis and continued for several months. A gastroscopy showed no pathology, except for some irritation of the esophagus, and, thus, lactose intolerance and celiac disease were excluded. Domperidone provided no relief, but after starting pantoprazole, the frequency of vomiting slowly decreased to zero.

In March 2019, the boy suddenly started vomiting again after another episode of gastroenteritis. Pantoprazole provided no relief. Because of the lack of pathology during his previous presentation, he was sent to our clinic of child and adolescent psychiatry with a suspicion of somatic and psychiatric comorbidity. At that time, he had lost 5 kg. He was very exhausted and had stopped going to school. After admission and exclusion of acute stressors, we first sent him to a pediatric gastroenterologist and a child neurologist to ensure that there was no underlying pathology. Organic causes were excluded, the patient was suspected to have cyclic vomiting (ICD-10 criteria). He vomited several times a day at that time, mostly in the morning and without being nauseous.

He was treated initially with risperidone liquid 1 mg/mL. He responded very well at first. The vomiting stopped for 4 weeks. However, the daily vomiting started again when the medication administration time was changed from evening to morning (because he sometimes forgot to take the medication in the evenings). The dose of risperidone was slowly increased to a daily dose of 2 mg. After every dose increase, the vomiting stopped for 4 or 5 days and then reappeared again. Because of the lack of effect, risperidone was phased out and replaced with amitriptyline in a daily dose up to 30 mg (initially in the morning and later changed to the evening because of vomiting in the morning). The vomiting continued. A lifestyle diary was no help in

discovering a possible trigger. Nevertheless, we referred the boy to a psychologist for additional cognitive-behavioral therapy in an attempt to control his vomiting. In May 2019, we decided—also at the request of the patient and his family due to lack of therapeutic response—to add risperidone liquid 1 mg/mL again in a daily before bed. The vomiting abruptly stopped, and at the time of article submission, the boy had experienced no vomiting episodes for almost 4 months.

DISCUSSION:

Cyclic vomiting syndrome is a heterogeneous disease, and its definition differs in the literature. Our case shows—like many cases in clinical medicine—an atypical course. The patient does not meet all Rome III criteria for cyclic vomiting syndrome. However, because there is no consensus on the diagnostic criteria of cyclic vomiting syndrome^{4–6} and given the fact that organic causes and major stressors were excluded, the diagnosis of cyclic vomiting syndrome therefore still suits our patient.

The treatment of cyclic vomiting syndrome includes nonpharmacologic and pharmacologic interventions. The nonpharmacologic interventions consist of avoiding triggers and supportive psychological interventions. In this case, we initially decided to treat the boy with medication because of his worsening condition and progressive weight loss. Because of the patient's heavy anticipation of vomiting, we also referred him to a psychologist for cognitive-behavioral therapy.

Although dopamine is an important neurotransmitter in the treatment of vomiting and cyclic vomiting syndrome, pharmacologic treatment options with antipsychotics are hardly mentioned in the literature. Most antipsychotics, especially haloperidol, have antiemetic properties. We chose risperidone because of (1) a possibly lower risk of side effects like extrapyramidal symptoms and (2) a previous positive experience in another child with the same disorder.

Still, after almost 4 months, the combination of risperidone and amitriptyline remains effective in our patient, but we do not understand why.

CONCLUSION :

Refractory cyclic vomiting is a perhaps not so rare but potentially exhausting and dangerous disorder with a big impact on quality of life. Remarkably, antipsychotics are, despite their well-known antiemetic properties, hardly mentioned in literature on the treatment of cyclic vomiting syndrome. Risperidone, in its unique combination with amitriptyline, might be an important alternative to achieve a satisfactory treatment result in refractory cases.