

Introduction: Cannabinoid hyperemesis syndrome (CHS) is linked to chronic, heavy cannabis use. Classically, it is characterized by cyclical vomiting, nausea, and abdominal pain. However, roughly 23% of cases include concurrent diarrhea, posing a risk of misdiagnosis as gastroenteritis.

Case Presentation: A 55-year-old woman with a history of anxiety, diverticulosis, and chronic, daily marijuana use, sought care in the emergency department (ED) due to 3 days of unrelenting vomiting and diffuse lower abdominal pain. She initially experienced severe diarrhea (over 10 episodes daily), which subsided before her ED visit. Her symptoms worsened after meals, but were alleviated by hot showers. She denied recent travel or sick contacts.

Two days before her presentation, she had visited another ED, where CT imaging suggested esophagitis and diverticulosis. She received ondansetron and was discharged without hospitalization. Unfortunately, her symptoms persisted, leading her to visit our ED. Upon arrival, she was afebrile and normotensive. Initial laboratory studies revealed hypokalemia, an elevated creatinine, leukocytosis, and a positive urine drug screen for marijuana. Despite treatment with intravenous fluids, ondansetron, pantoprazole, diphenhydramine, and metoclopramide, her symptoms did not improve. Troponins, blood alcohol level, liver function studies, and urinalysis were unremarkable.

Considering her refractory vomiting and abdominal pain in the setting of chronic marijuana use, CHS was suspected. Treatment with capsaicin cream applied to her abdomen resulted in complete symptom resolution which, combined with symptom relief following a hot shower, is nearly pathognomonic for CHS.

Discussion: CHS classically presents with emesis, nausea, and epigastric pain, often in the morning and less commonly during defecation or postprandially. However, 23% of presentations involve diarrhea, increasing the potential for misdiagnosis as gastroenteritis. Once considered a rare condition, recent research suggests that CHS affects 2.13-3.38 million Americans annually. These patients undergo an average of 17.9 ED visits before receiving a CHS diagnosis, imposing a \$76,920 per patient burden on the U.S. healthcare system. Therefore, CHS should be considered in the differential diagnosis not only for patients presenting with vomiting and a history of chronic cannabis use, but also for those experiencing concomitant diarrhea.