

Proper counseling for diagnosis and management of cannabinoid hyperemesis syndrome: a case report

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Abstract

Background: Cannabinoid hyperemesis syndrome (CHS) is an increasingly recognized condition linked to chronic cannabis use, yet it remains frequently overlooked in clinical practice. The syndrome is characterized by cyclic episodes of severe nausea, vomiting, and abdominal pain, often relieved temporarily by hot showers or baths. With the rising prevalence of cannabis use following its legalization, the incidence of CHS has surged, presenting a significant challenge in both diagnosis and management within primary healthcare settings. Understanding the epidemiology, risk factors, and potential long-term sequelae of CHS is crucial for timely identification and intervention. This case report highlights the challenge of diagnosis and management of CHS in primary healthcare.

Objective(s): To emphasize the importance of proper counseling and the use of Rome IV criteria in diagnosing CHS. To illustrate how this may reduce patient suffering and unnecessary investigation.

Case: A 22-year-old female with chronic, daily cannabis use presented with recurrent episodes of intense nausea, vomiting, and abdominal pain over a 2-year period. Extensive diagnostic evaluations were inconclusive. A tentative diagnosis of CHS was made by a medical student and family doctor based on published criteria. The Rome IV criteria were then applied for confirmation of diagnosis and management. In so doing, the patient was advised to cease cannabis use for a minimum of 3 months. Initially, symptom improvement was reported with cannabis cessation. However, symptoms recurred following a relapse in cannabis use.

Conclusion: To confirm the diagnosis of CHS, counseling should specify the need for a minimum of 3 months of cannabis cessation to achieve symptom relief. Increased physician and patient awareness of this minimal time period for drug cessation can help to avoid unnecessary investigations, and prolonged patient suffering. This case emphasizes the need for vigilance in recognizing CHS and consideration of cannabis as a potential cause of cyclic vomiting.

Keywords: cannabinoid hyperemesis syndrome; cannabis cessation; diagnosis; case report

Introduction

In primary healthcare, there has been an increase in cannabis-related Emergency Department visits, and cannabinoid hyperemesis syndrome (CHS) [1]. While this is not an uncommon condition, CHS can be overlooked. This may be related to a lack of awareness among healthcare professionals [2]. We present a case of CHS in a young female to highlight specific challenges in diagnosing and managing this condition.

Patient history

A 22-year-old female presented with recurrent episodes of intense nausea, vomiting, and diffuse abdominal pain. For 2 years, these episodes recurred monthly and lasted from 3 to 7 days. Despite multiple visits to the Emergency Department and Gastroenterology, her symptoms persisted. Later, when she visited a new clinic to see a family physician, she reported a history of chronic and daily cannabis use. A previous attempt at cannabis cessation for symptom relief was of short duration and unsuccessful, and symptoms of nausea and

vomiting were further complicated by a concomitant pregnancy.

Objective findings

A physical exam revealed mild tenderness in the epigastric and periumbilical regions. An esophagogastroduodenoscopy with gastric biopsy and a gastric emptying study were unremarkable and suggested no diagnosis. The patient was repeatedly seen in the Emergency Department for episodes of vomiting and found to have hypokalemia and an elevated white blood cell count requiring intravenous rehydration.

Diagnostic assessment

Following a thorough review of the patient's history and clinical presentations, the diagnosis of CHS was made by a medical student working with her family doctor. The diagnosis was based on the criteria of Simonetto *et al.* as the patient met four major and three minor criteria [3]. Notably, the challenge for diagnosis included the prolonged time following cannabis cessation required for symptom resolution to occur.

Key messages

- Confirmation of the diagnosis of CHS is only possible after sustained abstinence.
- Recommend 3 months of cannabis cessation for patients with cyclic vomiting.
- Early diagnosis prevents unnecessary investigations and patient suffering.

Therapeutic interventions

In the Emergency Department, medications including dimenhydrinate, ondansetron, and prochlorperazine had been tried without success. But at the office visit with the family physician, complete abstinence from cannabis use was advised for a minimum of 3 months, as outlined in the Rome IV criteria. This is because the diagnosis can only be confirmed when cannabis cessation leads to symptom resolution for a period of at least 3 months [4, 5].

Follow-up and outcomes

After 2 weeks of abstinence, the patient reported improvement in cognition and mood. She reported good support from her partner and sister in this process. However, a brief relapse occurred on 20 April, a date often associated with the celebration of cannabis. One month after this relapse, the patient again presented to the Emergency Department with vomiting. It is noteworthy that she claimed to have stopped smoking for 4 months, yet only 4 weeks separated 20 April from this most recent episode.

Discussion

With the legalization of cannabis, a notable surge in cannabis consumption, cannabis-related visits, and cases of CHS have been reported. In Canada, there has been a reported 22% increase in cannabis consumption since legalization, accompanied by a 20% rise in Emergency Department visits and a staggering 13-fold increase in the rate of CHS [1]. Yet CHS may be overlooked due to inadequate history-taking about cannabis use or a lack of awareness about the syndrome itself.

CHS is thought to result from chronic stimulation of cannabinoid receptors, leading to dysregulation of the endocannabinoid system. The syndrome is characterized by cyclic episodes of severe nausea, vomiting, and abdominal pain, often relieved by hot showers or baths, a behavior almost pathognomonic of CHS. Risk factors for CHS include male gender and long-term, heavy cannabis use, especially in individuals who began using cannabis at a young age. Although the exact prevalence of CHS is not well established, it may affect up to 32.9% of regular cannabis users presenting to the Emergency Department for any complaint [6].

Supportive care during acute episodes of CHS includes rehydration and the use of antiemetics, though some medications, like ondansetron, may be less effective in CHS patients [7]. Evidence suggests that medications such as haloperidol, or topical capsaicin might offer more relief by targeting specific pathways involved in the syndrome [8]. Other pharmacological options such as Nabilone, Zolpidem, and Gabapentin as well as alternative methods such as cognitive behavioral therapy and contingency management have all been shown to improve withdrawal symptoms while reducing relapse rates [9].

The management of CHS primarily involves complete cessation of cannabis use, which is the only definitive treatment. However, the symptoms of CHS can persist for weeks to months after cessation, making patient education and counseling critical components of care. Moreover, the debilitating acute phase and recurrent emergency visits are not the only possible types of morbidity. Possible long-term sequelae include weight loss and malnutrition [10], cannabinoid hyperemesis acute renal failure [11], and even death [12]. Furthermore, cannabis use and abuse are part of a complex social and personal reality unique to each patient. Therefore, when making recommendations regarding cannabis cessation, it is crucial to consider involving allied health professionals such as social workers, addiction specialists, and other community and behavioral support services.

We present this case of CHS, as the patient had not been properly diagnosed or counseled by a healthcare professional. Proper counseling would have advised cannabis cessation for at least 3 months to confirm the diagnosis, explaining that symptoms can persist for months after cessation. For the newer Rome IV diagnostic criteria to be met, there must be relief of vomiting episodes by sustained cessation of cannabis use, and all criteria must be fulfilled for at least 3 months [4, 5]. Given the rising incidence of CHS, it is crucial for clinicians to maintain a high index of suspicion for this syndrome in patients presenting with unexplained cyclic vomiting, particularly in regions where cannabis use is prevalent. We believe this case offers an important learning point, emphasizing the challenges in the diagnosis and management of this condition.

Conclusion

This case report sheds light on the challenges of diagnosing and managing CHS. Moving forward, clinicians should be vigilant in recognizing this syndrome and strongly recommend at least 3 months of complete cannabis cessation in patients with cyclic vomiting.

Conflict of interest statement

The authors declare no conflicts of interest.

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Data availability

The data that support the findings of this case report are not publicly available due to privacy and ethical restrictions. Patient data are available from the corresponding author upon reasonable request and with the permission of the patient.

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