

Reply to Letter “Cannabis-Related Cyclic/Episodic Hyperemesis Conditions: From Suspected to Definitive Cannabinoid Hyperemesis Syndrome”

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Dear Editor,

The key differentiation between cyclic vomiting syndrome (CVS) and cannabinoid hyperemesis syndrome (CHS) according to the ROME-IV criteria [1] is chronic cannabis use, relief of nausea and vomiting (N/V) from cannabis abstinence, and the supportive remarks associated with bathing behavior in the form of prolonged hot baths and showers. Keeping in mind the inclusion criteria, it is important to emphasize that in all studies included in this review, the selected samples consisted solely of cannabis users based on the collected demographics and available information. Additionally, there was some form of chronic pathological bathing behavior that is not usually observed in CVS, confirming that in the reviewed studies N/V was induced by CHS rather than CVS.

The scope of this systematic review was to assess and compile treatment options for CHS, explore their potential mechanisms, and not to assess the duration of cannabis abstinence and its impact on affected individuals. Differentiation between these two conditions was established in the reviewed data based on ROME-IV criteria. CVS is a diagnosis of exclusion with unclear etiology. The proposed pathophysiology of CVS has been linked to migraines, mitochondrial dysfunction, autonomic dysfunction,

neuroendocrine dysfunction, epilepsy, cognitive disorders, skeletal myopathy, and cranial nerve dysfunction [2]. There is conflicting evidence on cannabis both improving [3, 4] and worsening CVS, which is beyond the scope of this review and was not the case in any of the included studies, as the reviewed sample had solely cannabis-induced N/V. Additionally, hot showers were found to be pathognomonic only for CHS, based on the ROME-IV criteria [3].

The reviewed data showed that an abstinence period is not a significant differentiator between CVS and CHS, but chronic cannabis use is [5]. Unfortunately, it is not possible to track cannabis habits of patients after their discharge, and abstinence may not be an option for some users for multiple reasons including goals of care. Acute treatments for severe N/V in those with suspected CHS are clearly described in this review, and diagnosis is based on the established and unique ROME-IV identifiers, including a history of chronic cannabis use and supported by hot water hydrotherapy.

It is important to note that there is no consensus on the ROME-IV criteria definition of duration of cessation and the available data are low quality. The bias in the reviewed data is clearly described in the risk of bias section

of the paper [6]. First, long-term follow-up data is sparse and may be challenging to collect [6]. Second, individuals who were willing to cease cannabis also received other acute treatments such as benzodiazepines and psychosocial support, which may confound the reported outcome [7]. Third, in this study, symptoms were controlled with haloperidol despite the continuation of cannabis use [8], and lastly, most of the reviewed cases showed improvement in symptoms following immediate cannabis cessation [7]. Keeping all the above in mind, abstinence of cannabis for 12 months may not be a reliable differentiator between CVS and CHS, but noted chronic cannabis use and hot water bathing are aligned with the ROME-IV criteria [1].

CHS could be considered a subset of CVS, if not the main differentiator of chronic cannabis use in all of the reviewed studies, which is consistent with CHS based on ROME-IV identifiers. As a long-term follow-up may not be feasible in cannabis users and a complete cessation may not be possible, a specific cutoff for the duration of symptom-free periods may not be the sole diagnostic criterion for CHS [6].

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

References

- 1 Rome IV Criteria. Rome Foundation. 2016 [cited 2022 May 2]. Available from: <https://theromefoundation.org/rome-iv/rome-iv-criteria/>.
- 2 Sunku B. Cyclic vomiting syndrome. *Gastroenterol Hepatol*. 2009 Jul;5(7):507–15.
- 3 Venkatesan T, Sengupta J, Lodhi A, Schroeder A, Adams K, Hogan WJ, et al. An internet survey of marijuana and hot shower use in adults with cyclic vomiting syndrome (CVS). *Exp Brain Res*. 2014 Aug;232(8):2563–70.
- 4 Namin F, Patel J, Lin Z, Sarosiek I, Foran P, Esmaili P, et al. Clinical, psychiatric and manometric profile of cyclic vomiting syndrome in adults and response to tricyclic therapy. *Neurogastroenterol Motil*. 2007 Mar; 19(3):196–202.
- 5 Senderovich H, Patel P, Jimenez Lopez B, Waicus S. A systematic review on cannabis hyperemesis syndrome and its management options. *Med Princ Pract*. 2022;31(1):29–38.
- 6 Blumentrath CG, Dohrmann B, Ewald N. Cannabinoid hyperemesis and the cyclic vomiting syndrome in adults: recognition, diagnosis, acute and long-term treatment. *Ger Med Sci*. 2017 Mar;15:Doc06.
- 7 Allen JH, de Moore GM, Heddle R, Twartz JC. Cannabinoid hyperemesis: cyclical hyperemesis in association with chronic cannabis abuse. *Gut*. 2004 Nov;53(11):1566–70.
- 8 Jones JL, Abernathy KE. Successful treatment of suspected cannabinoid hyperemesis syndrome using haloperidol in the outpatient setting. *Case Rep Psychiatry*. 2016;2016:3614053.