

cannabinoid hyperemesis syndrome

A rare syndrome associated with long-term chronic cannabis use that is characterised by recurrent nausea and vomiting associated with abdominal pain has been reported. These symptoms have been reported to be alleviated temporarily by taking a hot shower or bath or more permanently by abstaining from cannabis use. Several case reports have been published across the world in the last five years and are listed in Table 1.

The first published cases of cannabinoid hyperemesis were reported by Allen and colleagues in 2004. This article spurred some interest in clinicians and several other case reports were published (see Table 1). However, the article also spurred some debate. Byrne and colleagues (2006) posited that “alternative explanations (of symptoms) need to be sought” and that the syndrome “should not be accepted as being caused by cannabis without additional reports and other evidence”. Although several case reports have been published, there remains to be any accepted explanation of symptoms.

Sontineni and colleagues (2009) have offered guidelines for the clinical diagnosis of cannabinoid hyperemesis. They suggest the essential features of: 1) history of regular cannabis use for years; 2) major clinical features of syndrome; 3) severe nausea and vomiting; 4) vomiting that recurs in a cyclic pattern over months; and 5) resolution of symptoms after stopping cannabis use. In addition diagnosis has supportive features of: 1) compulsive hot baths with symptom relief; 2) colicky abdominal pain; and 3) no evidence of gall bladder or pancreatic inflammation.

Various theories attempting to explain symptoms have been published. These theories fall into two themes; 1) dose dependent build up of cannabinoids and related effects of cannabinoid toxicity, and 2) the functionality of cannabinoid receptors in the brain and particularly in the hypothalamus (which regulates body temperature and the digestive system). Chang and Windish (2009) offer a summary of corroborating evidence for these theories; however, the authors note that the mechanisms by which cannabis causes or controls nausea and the adverse consequences of long-term cannabis toxicity remain unknown. The authors also conclude that organic disease should not be ruled out as a possible cause. Thus, Byrne and colleagues’ (2006) call for further evidence and research is still pertinent.

Table 1: Cannabinoid hyperemesis case reports

Author(s)	Year	Patient description and history of cannabis use
De Moore, et al.	1996	22 yr male in Australia – symptoms and cannabis use were present although the authors did not specify cannabis use as the cause
Allen, et al.	2004	19 patients in Australia cited with symptoms; 9 patients were reported in detail – all daily cannabis users for 3-27 years
Roche & Foster	2005	21 yr male in the UK – “freely admitted to smoking cannabis”
Boeckxstaens, G.E.	2005	36 yr male in the Netherlands – smoking cannabis for 24 yrs
Wolfhagen, F.H.	2005	46 yr patient from the Netherlands – smoking for 27 years, most recent 3 years of daily smoking
Roelofs, et al.	2005	“Regularly observed” in a psychiatric clinic in the Netherlands
Roche & Foster	2005	21 yr male in the UK – “freely admitted to cannabis use”
Alfonso, et al.	2006	49 yr female in Spain – regular smoking for 31 years
Wallace, et al.	2007	30 yr male, Britain – daily, long-term cannabis use for ten years
Singh & Coyle	2008	46 yr male in America – daily cannabis use since childhood
Budhraj, et al.	2008	19 yr male in America – daily cannabis use for 18 months
Chepyala & Olden	2008	38 yr male in America – almost daily cannabis use for 20 years
Chang & Windish	2009	25 yr female and a 23 yr male in America – the female smoked cannabis for 6-7 years almost daily, and the male smoked daily for 9 years
Sontineni, S.P., et al.	2009	22 yr male in New Zealand – smoking cannabis daily for 6 years
Watts, M.	2009	32 yr male in New Zealand – smoking cannabis daily for 16 years
Martineau-Beaulieu & Baillargeon	2009	53 yr male in Canada, daily use for “several years”
Ochoa-Mangado, et al.	2009	25 yr male in Spain, daily use for 6 years

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