

## Marijuana use may cause severe cyclic nausea, vomiting, a little-known, but costly effect

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Marijuana use—both natural and synthetic—may cause cannabinoid hyperemesis (CH) a littleknown but costly effect that researchers suggest is a serious burden to the health care system as it often leads to expensive diagnostic tests and ineffective treatments in an effort to find the cause of a patient's symptoms and provide relief, according to two separate case reports unveiled today at the American College of Gastroenterology's (ACG) 77th Annual Scientific meeting in Las Vegas. Cannabinoid hyperemesis is characterized by a history of chronic cannabis use followed by a cyclic pattern of nausea, vomiting and colicky abdominal pain. Interestingly, compulsive hot baths or showers temporarily relieve symptoms, another characteristic which aids clinicians in diagnosis.

"Most healthcare providers are unaware of the link between marijuana use and these episodes of cyclic nausea and vomiting so they are not asking about natural or synthetic cannabinoid use when a patient comes to the emergency room or their doctor's office with these symptoms," said coinvestigator Ana Maria Crissien-Martinez, M.D. of Scripps Green Hospital and Clinic in San Diego. She said CH was first described in a 2004 case series of 9 patients in Australia and since then, 14 case reports and 4 case series have been published, including a prospective series of 98 patients published by Mayo Clinic in February 2012.

"Patients who use cannabis whether natural or in synthetic form called 'Spice' also don't realize their unexplained episodes of cyclic nausea and vomiting may be a result of this use, with some increasing their cannabis use because they may think it will help alleviate their symptoms—and it actually makes them worse," said Dr. Crissien-Martinez . "The only resolution is cannabis

cessation."

Dr. Crissien-Martinez co-authored the case report, "Marijuana: Anti-Emetic or Pro-Emetic" which described a series of 9 patients with cannabinoid hyperemesis at Scripps Green Hospital with average age at diagnosis 30 years-old; 88 percent male; onset of cannabis use during teen years; 88 percent used cannabis daily; 56 percent compulsive bathing behavior; and 80 percent symptom resolution with cannabis cessation.

The other case report, "Spicing Up the Differential for Cyclic Vomiting: A Case of Synthetic-Cannabinoid Induced Hyperemesis Syndrome (CHS)," may be the first reported case of CH attributed to synthetic cannabinoid, according to Fong-Kuei Cheng, M.D. and his research team from Walter Reed Walter Reed National Military Medical Center/Uniformed Services University of the Health Sciences in Bethesda, MD.

"Legal synthetic cannabinoids became available in the United States by 2009 with widespread usage among military personnel due to its ability to elude standard drug testing. It is important to recognize that routine urine drug testing does not include JWH-018 and JWH 073, which are the primary components in synthetic cannabinoids," said Dr. Cheng.

The case report described a 22-year active duty military male who was admitted with a 10-month history of progressive, intermittent abdominal pain, nausea and vomiting, with episodes occurring every two months and lasting up to a week. He underwent several diagnostic tests before a urine synthetic cannabinoid test confirmed the diagnosis of cannabinoid hyperemesis syndrome (CHS). Since discontinuing these drugs, the patient has remained symptom-free, according to the case



## report.

"This case illustrates that CHS should be in the differential diagnosis of unexplained, episodic abdominal pain with nausea and vomiting, particularly if relieved with compulsive hot showers. Recognition of this syndrome is important to prevent unnecessary testing and to reduce health care expenditures," said Dr. Cheng. "We have also noted, particularly in the active duty population where drug testing for cannabis usage is done routinely, that there appears to be an increased usage instead of the synthetic cannabinoids, so we would advocate routine additional testing for them when the clinical suspicion is high."

Patients frequently have multiple hospital, clinic and emergency room visits with extensive negative work-up to include imaging studies, endoscopies, and laboratory testing before they are finally diagnosed with cannabinoid hyperemesis, according to the researchers of both case reports.

"We estimate \$10,000 to be the minimum cost of one admission—but on average our patients required admission to the hospital 2.8 times, a total of almost \$30,000 for workup," said Dr. Crissien-Martinez, who added that that cost does not include the added costs of primary care physician and/or gastroenterologist and <a href="mailto:emergency room">emergency room</a> visits, which averaged 2.5 and 6 times respectively.

Dr. Crissien-Martinez said that 80 percent of the Scripps Green patients who stopped cannabis experienced symptom resolution; however, only one of them remained abstinent and consequently symptom-free.

"As health care providers, we must be aware of the potential side effects of chronic cannabis use and understand that cannabinoid hyperemesis is diagnosed clinically to avoid expensive diagnostic and therapeutic modalities," said Dr. Crissien-Martinez. "Instead the focus should be shifted towards counseling and resources allocated towards marijuana cessation."

Provided by American College of Gastroenterology



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