Non-Traditional Anti-Emetic Therapy for Cannabinoid Hyperemesis Syndrome: A Case Report

Sara Groome, PharmD; Kelly Le, PharmD; Christina Karalis, PharmD; Eric Selavage, PharmD; Brandi Thoma, PharmD, BCPS, BCCP

Department of Pharmacy, Thomas Jefferson University Hospital, Philadelphia, PA

BACKGROUND

• Marijuana is one of the most commonly used recreational drugs and is widely known for both its anti-emetic and appetite-stimulating properties

• Medicinal-grade marijuana has been available for patients suffering from various medical conditions, such as chemotherapy-induced nausea and vomiting, for example. It also has been utilized in patients with chronic pain, in addition to a number of other disease states

• While casual, intermittent use elucidates the aforementioned positive effects, chronic use of large quantities of marijuana may precipitate the contrary, such as extensive nausea and vomiting, a hallmark of Cannabinoid Hyperemesis Syndrome (CHS)

• CHS is hypothesized to result from alterations within the endocannabinoid system. The involvement of two vital cannabinoids, CB1 and CB2, which are located within the central nervous system (CNS) and gastrointestinal tract (GI)

• Of note, CHS is similar in presentation to another disorder, Cyclic Vomiting Syndrome (CVS); the two are often confused, or even misdiagnosed

PATIENT CASE

History of Present Illness

The patient is a 20 year old male who presented to an outside hospital with a two day history of nausea and forceful vomiting after heavy marijuana use

He was unable to hold down food, but was attempting to hydrate during this time

The patient has a history of vomiting episodes in the past, but to this extent

While in the hospital, he received ondansetron and metoclopramide, in an attempt to quell his episodes of emesis

He was then transferred to Thomas Jefferson University Hospital (TJUH) for further management

Past Medical History:

• CHS (complicated by boerhaave's syndrome)

• CVS

Social History:

• Marijuana smoker

• Former 1 pack/day cigarette and vape smoker (pack years unknown)

• EEOCH drinker (sociably)

Medications Prior to Arrival: No known medications prior to admission

Initial Assessment:

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<td>15.4</td>
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Diagnostic Findings:

Chest CT: Diffuse subcutaneous emphysema and pneumomediastinum with extension of air along the esophagus into the abdomen.

Hospital Course

• The patient was transferred to TJUH from an outside hospital, complaining of several days of forceful vomiting. He also reported feeling "tissue in his neck."
• New radiologic evidence suggestive of pneumomediastinum
• He was made strictly NPO and he was started on IV fluids and Zofran 4mg IV every 6 hours
• He reported resolution of the "tissue in his neck," despite reporting adventitious noises and peristaltic sounds in the neck. He continued 200mg IV every 6 hours, Phenergan 6.25mg every 6 hours, and Ativan 1mg IV every 6 hours. He continued Zofran 4mg IV every 6 hours, and he was discharged home on 7/12/18 with ondansetron 4mg and Phenergan 6.25mg given every 6 hours
• He reported he felt his symptoms were improving, and his diet was advanced to a liquid diet, followed by a solid food trial (unsuccessful). During this trial, he experienced another episode of emesis and was subsequently deemed not ready for discharge
• He continued 200mg IV every 6 hours, and he was made NPO for further management
• He was made aware that his clinical scenario was related to his heavy marijuana use and was educated to discontinuing future use
• He suddenly reported no more episodes of nausea and vomiting, and did not require any pain medications overnight
• He reported that his nausea dissipated around 3pm yesterday and he felt that the IV Zofran and IV Ativan were needed for nausea and vomiting symptoms
• He was started on a regular diet, anticipating discharge if able to tolerate
• He was discharged on this day after a successful trial of an oral diet

DISCUSSION

• Legalization of recreational marijuana has been ongoing throughout the United States, thereby creating expanded access for patients, as well as the potential for the increased risk of hospital admissions due to CHS

• CHS is often underdiagnosed, which may be attributed to its delay in onset. Clinicians are also becoming more familiar with its presence

• Additionally, many patients with CHS are often misdiagnosed, due to the broad range of disorders with similar symptomatic presentations

• Although a clearly defined mechanism behind CHS has yet to be discovered, it is prudent for pharmacists to become familiar with the multiple modalities utilized to combat this disorder, and to become cognizant that non-traditional therapies are vital aspects of treatment

• More research is warranted in this therapeutic area, as no clear treatment regimen has been defined

• Unfortunately, other than cessation of marijuana use, a proven cure has yet to be established

REFERENCES


