CYCLICAL VOMITING ENSHROUDED IN A CLOUD
HPI

- 39 year old man
- Epigastric pain X 3 days
  - Recurrent for the past 2 years (@least 2x/month)
  - Dull then sharp, 8/10
  - Non radiating, constant

- Associated with nausea and vomiting
ROS

- ↓appetite but no weight loss
- No change in bowel movements
- No fever, chills or night sweats
  - No chest pain, palpitations or respiratory symptoms
PMH

- Recurrent abdominal pain
- Recurrent vomiting
- Knee surgery and vasectomy
- Meds – Vitamin C
FSH

- Heart disease (mother)
- SH – Smokes a few cigarettes daily; smokes marijuana
Physical Examination

- VS: BP149/80, HR 77, RR 18, O2 sat 98%, T 98 F
- Chest: Clear to auscultation
- Heart: S1 S2 normal No murmurs
- Abdomen: Epigastric tenderness No guarding or rebound normal bowel sounds
- Extremities: no Pedal edema
- CNS - no focal deficits
LABS

- CBC; WBC 15.5 Hb 14 Hct 43  Plt 273
- BMP: Na 142 K 4.4 Cl 105 CO2 23 BUN 17
  Creatinine 0.8
- Hepatic: AST 42  ALT 38 AlkP 72 Bili 0.65 Alb 5.0
- Amylase and Lipase – normal
- UA – Normal
OTHER WORKUP

- EKG-normal
- CT scan of abdomen and pelvis normal
Differentials

- Gastritis/GERD
- Peptic Ulcer disease
- Biliary Colic/stone
- Cyclical vomiting syndrome
- Inferior wall MI
- LL Pneumonia
- Porphyria or Lead Poisoning
- Pancreatitis
- Gastric malignancy
- Splenic abscess/infarction
- Intestinal obstruction
Ruling In/Out

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HOSPITAL COURSE

- Nexium, Ultram, Zofran
- GI consulted → EGD
- Nausea alleviated by warm showers
- Prior to D/C ← Medical records were obtained from two other hospitals
  - Recurrent admissions (abdominal pain)
  - EGDs (normal). Most recently a month prior
  - CTs/HIDA - normal
  - Porphyria screen – negative
Cannabinoid Hyperemesis Syndrome
History of Marijuana

• Cannabis plant
  – 483 known compounds
  – Incl. THC and @least 84 cannabinoids

• 2737 BC – Chinese emperor Shen Nung
  – Rheumatism
  – Gout
  – Malaria, and absent-mindedness

• Middle East – Hashish
Marijuana In America

• Introduced in the 16\textsuperscript{th} Century - Spanish
• Listed in the Pharmacopeia (1850-1942)
• Controlled substance Act 1970
  – Marijuana Heroin and LSD – Schedule I
• Gateway drug theory
• Compassionate Use Act 1996 – Medical Marijuana
• 31 states with Medical Marijuana laws in place
CB1 and CB2 receptors
CB1 and CB2 receptors

- CNS
- Heart
- Endothelial
- Liver
- Hematopoietic
- GIT
- Testes
- Lung
- Kidney
Marijuana in Medicine

• Preclinical/animal studies
  – Antitumor activity (Colon, HCC and Breast)

• Clinical Trials (human)
  – Rx of cancer – none
  – Side effects of cancer and cancer therapy
  – Stimulating appetite
  – Pain relief
  – Anxiety and sleep
  – ↓ Intraocular pressure
  – seizures

• FDA approved – Dronabinol  Nabilone  Epidiolex

• Cannabis not FDA approved
Cannabinoid Hyperemesis Syndrome

Cannabinoid hyperemesis syndrome is a recently described condition that was first penned in the literature in 2004. Numerous cases have since been described, all with the unifying features of cyclical vomiting in the absence of organic etiology in chronic cannabis users. Other important features are abdominal pain and improvement of symptoms with cessation of cannabis use.
Cannabinoid Hyperemesis Syndrome

The use of marijuana-derived compounds as anti-emetics is well documented. It is now known that the cannabinoids can also exert opposing effects on the emesis response. A disruption in the balance between pro- and antiemetic effects may explain the “paradoxical” vomiting seen in cannabinoid hyperemesis syndrome. Alteration in the hypothalamic regulation of body temperature may explain the compulsive hot showering seen in many patients.
Cannabinoid Hyperemesis Syndrome

While the exact underlying pathophysiology is unclear, various mechanisms have been proposed which are thought to involve the CB1 receptor.

Cyclic vomiting syndrome remains the primary differential consideration. Both conditions are characterized by similar symptoms. Long term follow up is necessary to clearly separate the two, as complete resolution of symptoms after cannabis cessation is a feature that is unique to CHS.
Management

Treatment is supportive as well as educational. During the hyperemetic phase, supportive treatment involves management of abdominal pain, fluid replacement, and prevention of vomiting. Various classes of anti-emetics, such as D2 and H1 receptor antagonists, have been tried with minimal or no effect. Patients commonly experience temporary relief from compulsive hot showers or baths and permanent relief from cessation of cannabis use.
Conclusion

As the prohibition on marijuana use is progressively lifted, we will continue to see an increase in its usage. This will no doubt result in an increase in the number of cases of CHS. Clinicians should be aware of this condition and have a high level of suspicion in patients who present with hyperemesis and history of concurrent cannabis use.
References


References


7. Galli, JA; Sawaya, RA; Friedenberg, FK


10. Blumentrath, CG; Dohrmann, B; Ewald, N.