

Presentation & Treatment of CHS in Diverse Settings

Recognition and Management in the Emergency Department & Hospitals

Agenda

- Typical patient profile & clinical presentation of CHS
- Diagnosis: criteria & considerations
- Strategies for reducing patient resistance to the diagnosis
- Treatment: medications and algorithms

Clinical Presentation

The Four Phases of CHS

Prodromal

- Early morning nausea and abdominal discomfort (~30–90 minutes)
- Sweating and chills; feelings of panic

Hyperemetic

- Intense, recurrent vomiting and abdominal pain; extreme thirst (~days)
- Neurological symptoms (focal seizures, facial droop, weakness, numbness, speech or visual deficits)

Recovery

- Vomiting subsides; symptom-free until the next cycle
- Cycle repeats with continued cannabis use

Interepisodic

- Minimal to no symptoms between episodes
- Patients often appear well and are frequently discharged home

Typical Patient Profile

Demographics

- Highest ED visit rates in ages 18–25, males, and Black individuals
- Cannabis-related ED visits highest in the Northeast U.S.

Use Pattern

- Chronic, heavy use — near-daily to several times per day
- Nearly half report >5 years of use before CHS onset

Risk Predictors

- Male sex
- Consuming edibles and concentrates
- First use before 18
- Using for N/V or HA/migraines
- Growers
- Alcohol use
- Bipolar disorder or dissociative identity disorder

ED = emergency department; HA = headache; N/V = nausea/vomiting

Diagnosis in the ED

Diagnostic Approach

- Obtain a thorough history: frequency/duration of cannabis use, symptom pattern, and prior ED visits for similar symptoms; use of medical cannabis or synthetic cannabinoids
- Perform a limited, targeted workup to rule out mimics (e.g., basic labs ± abdominal imaging)
- Consider CHS early in recurrent, unexplained cyclic vomiting to avoid repeat costly workups
- Apply the Rome IV criteria

Rome IV Diagnostic Criteria for CHS

1. Stereotypical, episodic vomiting resembling cyclic vomiting syndrome in onset, duration, and frequency
2. Presentation after prolonged use of cannabis
3. Relief of vomiting with sustained cannabis cessation

*Criteria met for the last 3 months, with onset ≥ 6 months before diagnosis

**May be associated with pathological bathing behavior

Cannabis Withdrawal vs CHS

	Cannabis Withdrawal	CHS
Symptom onset from the last consumption	> 24 hours	< 24 hours
Symptomatic relief with hot showers	No	Yes
Psychological symptoms (e.g., irritability, sleep difficulty, nervousness, restlessness, depression)	Yes	No
Clinical course/pattern	No defined pattern	History of dosing escalation; 3 phases of symptoms
Quantity of ingestion/use correlates with severity of symptoms	Yes	No

Managing Patient Resistance to a CHS Diagnosis

Patient Resistance to CHS Diagnosis

What Patients Say

- Cannabis has many medical benefits—it is healing, not harmful.
- My symptoms and/or length of cannabis use differ from the “classic” CHS presentation.
- CHS is a medical conspiracy to get people to stop smoking and/or to prevent the legalization of cannabis.

Why Resistance Happens

- Lack of ‘CHS tests’
- Strong positive views of cannabis—how can something so beneficial have a negative impact on their lives?
- Cannabis is a consistent part of some patients’ lives—accepting the CHS diagnosis threatens this stability
- Cessation feels paradoxical when cannabis is used to treat nausea

Strategies to Manage Resistance

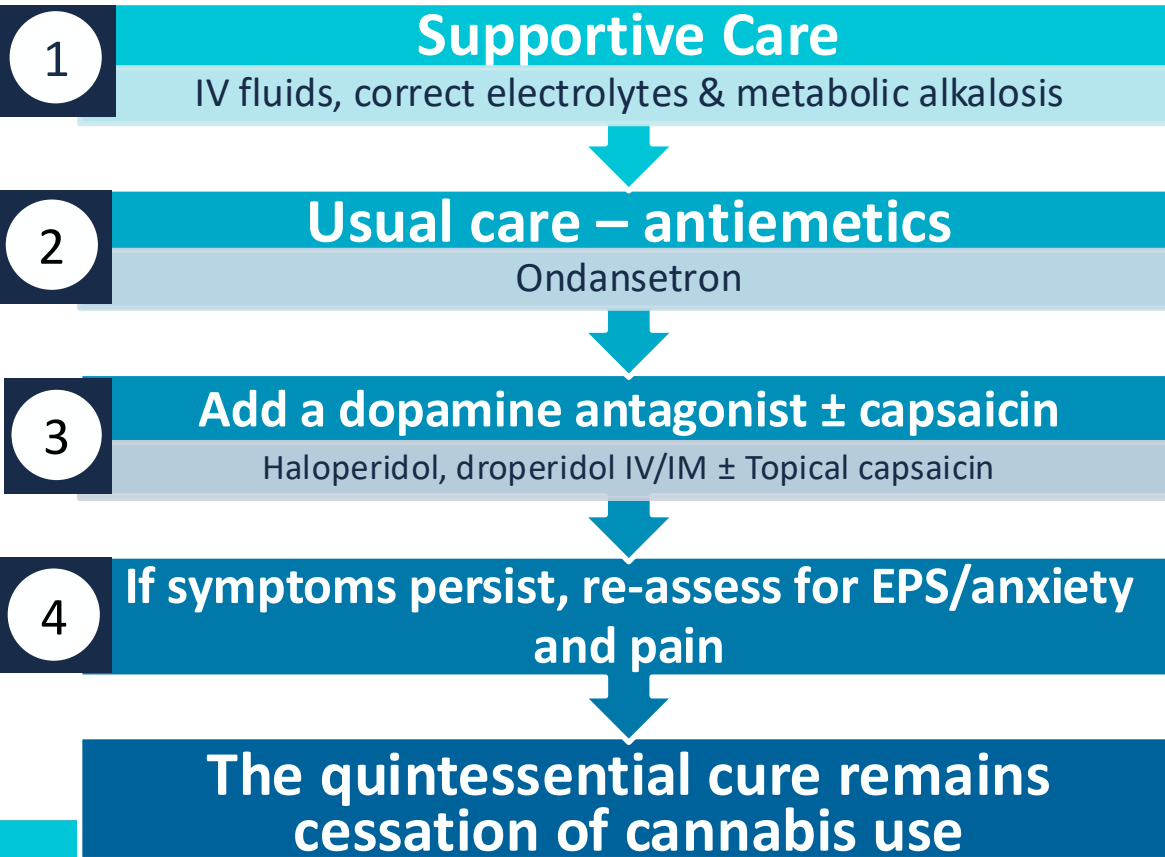
- Take a nonjudgmental, detailed cannabis-use history; normalize the conversation
- Perform a thorough workup to rule out other causes
- Use brief motivational interviewing to build insight rather than confrontation
- Clearly articulate that cannabis can cause harm
- Explain the dose-dependent, paradoxical mechanism in plain terms
- Offer concrete next steps: resources, follow-up, and a warm handoff to primary/addiction care

Management in the ED

Guideline Management

- 2024 Society of Academic Emergency Medicine Guidelines for Reasonable and Appropriate Care in the Emergency Department (GRACE-4)
- 2024 American Gastroenterological Association Clinical Practice Update on Diagnosis and Management of Cannabinoid Hyperemesis Syndrome: Commentary
- Other institutional guidelines & proposed algorithms

ED Treatment Algorithm



AVOID AS FIRST-LINE:

Opioids

Worsen nausea, contribute to gastroparesis, and carry misuse risk

Benzodiazepines

Insufficient evidence as monotherapy for CHS symptoms

Both may support Step 4 — benzodiazepines for EPS/anxiety, opioids only if pain persists.

Alternative Proposed Algorithm

1

Capsaicin 0.075%-0.25%

If symptoms persist after 1 hour, proceed to step 2



2

Add haloperidol 5 mg IV/IM/PO or Olanzapine 5 mg IM/ 10 mg PO

If symptoms persist after 8 hours, repeat step 2 or proceed to step 3



3

Add diazepam 20 mg PO BID or lorazepam 1 mg IV/PO or clonazepam 0.5 mg PO q8h

If symptoms persist after 24 hours, repeat steps 1 or 3, or proceed to step 4



4

**Aprepitant 125 mg PO day 1, 80 mg PO days 2-3
or propranolol 1 mg IV, then 2 mg IV
or cyclizine 50 mg PO q6h**

Medication Quick Reference

Agent	Typical ED Dose	Onset	Comments
Ondansetron	4–8 mg IV/IM/ODT; repeat q4–8h prn	~30 min	Usual care; monitor QTc (dose-dependent) & serotonin syndrome
Haloperidol	0.5–5 mg IV/IM; may repeat	~15 min (IV/IM)	Monitor for EPS and QTc prolongation
Droperidol	0.625–2.5 mg IV/IM (up to 5 mg/dose)	3–10 min	Boxed warning for QTc; low risk at antiemetic doses ≤ 2.5 mg
Olanzapine	5–10 mg PO/ODT or IM	15–30 min	Second-line; less EPS than first-gen agents
Capsaicin	0.025–0.15%: Apply thin layer/1-in strip to abdomen; repeat up to 3–4x/day	~30 min	Usually adjunctive to standard antiemetics; application-site burning/erythema
Aprepitant	40-60 kg: 80 mg PO 2-3 times weekly >60 kg: 125 mg PO 2-3 times weekly	~3-4 hours	Third-line; FDA-approved for CINV and PONV

Non-Pharmacologic Therapies

- Hot showers, baths, heating pads
- Mindfulness and relaxation techniques
- Good sleep hygiene
- Adequate nutrition and hydration
- Reduce sensory stimulation

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