Management of Alcohol Use Disorder in Acute Care

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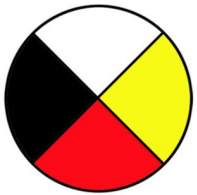
In the spirit of reconciliation, I acknowledge that I am located on Treaty 6 territory, and I respect the histories, languages, and cultures of First Nations, Metis, Inuit, and all First Peoples of Canada, whose presence continues to enrich our vibrant community.



Disclosure

- No conflicts to disclose

Learning objectives

- Recognize symptoms and timeline of alcohol withdrawal
- Discussion of available assessment tools
- Pathways for supporting patients with alcohol use disorder
    - Treating withdrawal
    - Anticraving medications
    - Managed alcohol programs (MAPs)

Harm reduction

A set of practical strategies and ideas aimed at reducing negative consequences (health, social, and economic) associated with legal and illegal substance use.

A movement for social justice built on a belief in, and respect for, the rights of people who use substances.

harmreduction.org (6/19)

Symptoms and timeline of alcohol withdrawal

Alcohol withdrawal

Time from alcohol cessation	Symptoms of withdrawal
<6 - 12 hours	• Hand tremors • Nausea, vomiting • Mild agitation • Anxiety • Insomnia • Headache • Diaphoresis
12 - 24 hours	Alcohol hallucinosis: • Transient tactile disturbances (pruritus, pins and needles, burning, numbness) • Transient auditory and visual hallucinations Usually resolves after 48 hours

Alcohol withdrawal

Time from alcohol cessation	Symptoms of withdrawal
24 - 48 hours	• Tachycardia • Hypertension • Marked agitation • Withdrawal seizures
48 - 72 hours*	• Delirium tremens (disorientation, confusion, severe anxiety) • Seizures • Hallucinations (typically visual) • Profuse diaphoresis • Tachycardia • Tremors (severe) Can present as early as 2 hours from cessation; typically symptoms peak between 3-5 days

Assessment Tools

Prediction of Alcohol Withdrawal Severity Scale (PAWSS)

- Help identify patients who may be most at risk for developing severe alcohol withdrawal syndrome
  - Can help to select appropriate withdrawal management pathway
- Validated score based tool
  - <4 ➔ low risk
  - >4 ➔ high risk

Clinical Institute Withdrawal Assessment for Alcohol Revised (CIWA-Ar)

- Standardized, validated tool
- Used to assess level of withdrawal
- Symptom-triggered dosing of benzodiazepines
  - Symptom-triggered dosing has been shown to be more effective than fixed-dosing
    - For both sedating and anticonvulsant effects
    - Higher doses given early along with close monitoring of CIWA scores
    - Patients improve more quickly; require less medication overall
    - Lorazepam = elderly patients, those with respiratory disease, and/or hepatic disease
      - No active secondary metabolites

Clinical Institute Withdrawal Assessment for Alcohol Revised (CIWA-Ar)

- Score for each response or observation using the scale
- Maximum possible score = 67

Mild withdrawal	CIWA greater or equal to 9
Moderate withdrawal	CIWA 10-19
Severe withdrawal	CIWA greater or equal to 20

Each rise in score group is associated with a higher relative risk of complications (confusion, seizures, hallucinations) in those left untreated

Objective CIWA

- Not validated as an alternative to CIWA-Ar
  - Developed from a case report where CIWA-Ar proved to be unreliable for the clinical scenario
- Focus on objective findings of withdrawal
  - Can be modified based on the clinical scenario and patient's baseline (if known)

Objective alcohol withdrawal scale

The objective alcohol withdrawal scale is applied as follows:

- *Score 1 point for each of*
  - *-systolic blood pressure ≥ 160 mm Hg or diastolic blood pressure ≥ 90 mm Hg;*
  - *-heart rate ≥ 90 beats/min;*
  - *-tremor;*
  - *-diaphoresis; and*
  - *-agitation*
- *If total ≥ 2 give 1 mg oral lorazepam (or 10 mg of diazepam)*
- *If total ≥ 3 give 2 mg oral lorazepam (or 20 mg of diazepam)*
- *Reassess every hour until score is < 2 for 3 consecutive measures, then reassess every 6 hours for 24 hours, then every 24 hours for 72 hours, then discontinue*

Thiamine (vitamin B1)

- Individuals with AUD have impaired absorption and may have impaired conversion to pyrophosphate (active form)
  - Alcohol metabolism raises the demand for thiamine
  - Poor nutrition decreases the supply of thiamine
  - Coenzyme thiamine pyrophosphate essential for glucose metabolism in the brain
- Given to prevent Wernicke-Korsakoff encephalopathy
  - Series of symptoms that occur due to the inability to metabolize glucose (due to thiamine deficiency)
  - Always give thiamine before giving glucose
    - Prevent potential severe and irreversible cerebral and brain stem damage
- Dosing:
  - Severe withdrawal: 500mg IV q8h x 72h, then 300mg IV x 3 days, then 100mg po daily
  - Mild-moderate withdrawal: 300mg IV x 3 days, then 100mg po daily

Anticraving medications

Acamprosate

- Mechanism of action not well understood
  - Believed to restore imbalance between glutamate mediated excitation and GABA-mediated inhibition of neural activity and to reduce general neuronal hyperexcitability
  - Thereby thought to reduce symptoms associated with withdrawal and modify response to alcohol related cognitive clues
- Found to significantly reduce likelihood for returning to any drinking by 14% and increased cumulative duration of abstinence by 11 days compared to placebo
- Predictors of positive response - completing withdrawal management, having abstinence as a treatment goal, higher baseline anxiety levels, physiologic dependence, lack of family history, later age of onset (>40 y/o)

Acamprosate

- Typical dosing: 333mg po TID x 3 days then increase to 666mg po TID
  - Most guidelines suggest to initiate therapy 4 days after last EtOH consumption
  - Adjust for renal dysfunction and/or weight < 60kg
- Most common side effect: GI upset
- TID dosing/pill burden often barrier to adherence
- Pregnancy: category C - *benefit versus risk assessment*
- Coverage: special authorization required for ABC plans; open benefit NIHB

Naltrexone

- Mu-opioid receptor antagonist
  - Shown to block euphoria associated with alcohol consumption
  - Hypothesized to reduce rewarding effects of alcohol following consumption and thereby reducing cravings
  - Effective at preventing return to heavy (binge) or ongoing drinking
- Predictors of positive response - high levels of cravings, family history of AUD

Naltrexone

- Typical dosing: 25mg po daily x 3 days then increase to 50mg po daily
  - Mostly studied as daily dosing
  - Some RCTs show that PRN dosing can be effective
- Contraindicated in acute hepatitis, severe liver dysfunction and/or those requiring/taking concurrent opioids
- Most common side effect: GI upset (nausea - 10%), mood (depression - 5-7%)
- Pregnancy: category C - *benefit versus risk assessment*
- Coverage: open benefit for ABC plans and NIHB

Gabapentin

- **Off label**
- Emerging evidence for outpatient withdrawal management for patients at low risk for severe withdrawal
- Three RCTs (up to 600mg po TID) - small to moderate effects on abstinence and heavy drinking outcomes, cravings, mood, and insomnia compared to placebo
- Caution in geriatric patients, pregnant patients, concurrent use of other CNS depressants, renal impairment, compromised respiratory function, cognitive impairment

Managed Alcohol Programs (MAPs)

- To support individuals with active, severe alcohol use disorder
  - In the acute care context: to support patients to stay in hospital for required treatment(s) where forced detoxification is harmful and abstinence is not a realistic short term goal
- Typically, provide prescribed doses of alcohol at regular intervals
- Intoxication assessment prior to each dose
- Acute care models are inherently more medicalized than community based MAPs

National guidance documents in progress...

Thank you!

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