MEDICALLY SUPPORTED ALCOHOL WITHDRAWAL MANAGEMENT

Community and Residential Detox Perspectives

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Meta:Phi Conference- Sept 25, 2021

ACKNOWLEDGMENT

AGENDA

- History and Context
- Alcohol Withdrawal Syndrome
- Inpatient/Hospital Detox
- Medically-Supported Residential Detox
- Home Detox
- How do I decide?

ALCOHOL WITHDRAWAL SYNDROME: A HISTORY

Identified from residue in old clay pots from China from 7000 BCE

Ancient texts from the Sumerians placed rules and regulations on alcohol consumption

Egyptians made beer from barley, wheat and yeasty dough and called it the "Drink of the Gods"

Greeks were the first to document their winemaking process 2000 BCE

Disulfiram (Antabuse®) was discovered in the 1940s to deter people from misusing alcohol

(Wagner and Thomas, 2019)

ALCOHOL-RELATED HARMS

18% of Canadians aged 15 or older have had, currently have, or will develop an Alcohol Use Disorder during their lifetime

About 50% of individuals will experience alcohol withdrawal symptoms; most will recover with no medical intervention.

Every year, alcohol use costs Canadian taxpayers $14.6 billion

Alcohol contributes to 8% of premature deaths in Canada

(Shield, 2012; Statistics Canada, 2019; Mirijello, 2015)

ALCOHOL WITHDRAWAL SYNDROME

DSM criteria

- A problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:
- 1. Alcohol is often taken in larger amounts or over a longer period of time than intended.
- 2. There is a persistent desire or unsuccessful efforts to cut down or control alcohol use.
- 3. A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or recover from its effects
- 4. Craving, or a strong desire or urge to use alcohol.
- 5. Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home.
- 6. Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol.
- 7. Important social, occupational, or recreational activities are given up or reduced because of alcohol use.
- 8. Recurrent alcohol use in situations where it is physically dangerous.
- 9. Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol
- 10. Tolerance
- 11. Withdrawal

Severity:

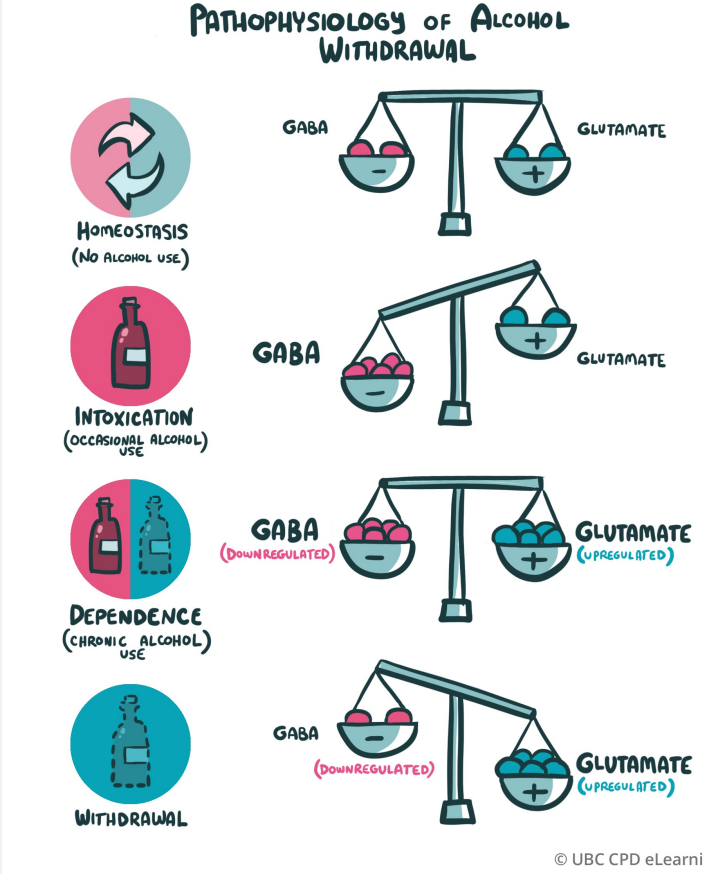
Mild: 2-3 symptoms

Moderate: 4-5 symptoms

Severe: 6 or more symptoms

CAUSES OF WITHDRAWAL

- Neurotransmitter systems are chemical reactions in your brain that help send messages and control your body
- Gamma-aminobutyric Acid (GABA) agonist and Glutamate Antagonist are normally present and well balanced in your body – GABA helps to slow you down, while Glutamate helps to perk you up (endorphins, help you deal with excitement and stress)…
- When you get drunk occasionally, your body slows down you feel relaxed and drowsy… so your body starts to make extra Glutamate and slows down GABA production -- to perk you up.
- When you're dependent on alcohol and using it all the time, your body gets used to NOT producing those chemicals to slow you down (GABA is downregulated), and it gets used to producing a whole lot more chemicals to perk you up (Glutamine is upregulated)
- So what happens when you stop??



WITHDRAWAL

- Symptoms usually kick in 6-24 hours after the last drink, the worst point is around 24-48 hours, and resolve (for the most part) around 5-7 days.

SIGNS/SYMPTOMS OF ALCOHOL WITHDRAWAL

- Initial Symptoms:
  - Tremor, anxiety, insomnia, restlessness, and nausea
- Moderate Symptoms:
  - Low grade fever, rapid breathing, tremor and profuse sweating
- Severe Symptoms:
  - Seizures, delirium tremens (DTs)

Trevisan, L.A., et al. (1998). Complications of Alcohol Withdrawal. Pathophysiological Insights. Vol. 22, No. 1. retrieved from https://pubs.niaaa.nih.gov/publications/arh22-1/61-66.pdf

SIGNS/SYMPTOMS OF ALCOHOL WITHDRAWAL

These are the *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition) (*DSM-5)* diagnostic criteria for alcohol withdrawal.

All 4 must be present to diagnose alcohol withdrawal.

A. Cessation of (or reduction in) alcohol use that has been heavy and prolonged

B. Two (or more) of the following, developing within several hours to a few days after cessation of (or reduction in) alcohol use described in Criterion A:

1. Autonomic hyperactivity (eg, sweating or pulse rate greater than 100 bpm)
2. Increased hand tremor
3. Insomnia
4. Nausea or vomiting
5. Transient visual, tactile, or auditory hallucinations or illusions
6. Psychomotor agitation
7. Anxiety
8. Generalized tonic-clonic seizures

C. The signs and symptoms in Criterion B cause clinically significant distress or impairment in social, occupational, or other important areas of functioning

D. The signs or symptoms are not attributable to another medical condition and are not better explained by another mental disorder, including intoxication or withdrawal from another substance

DELIRIUM TREMENS / "DT'S"

This is a rare form of severe withdrawal, the most serious complication of alcohol withdrawal

Characterized by:

- Severe confusion, disorientation and/or hallucinations
- Clouding of sensorium (A COMPLETE HALLUCINATION WITHOUT ANY RECOGNITION OF THE REAL WORLD)
- Autonomic Hyperactivity (Tachycardia, Hypertension, Hyperthermia, Agitation, Sweating)

Usually BEGINS 48-96 hours after the last drink, can last up to 5 days

CONCEPTS IN WITHDRAWAL MANAGEMENT FOR ALCOHOL

- Selecting an an appropriate location for withdrawal:
  - Inpatient
  - Community Based/Residential
  - Outpatient/Home Detox
- Stratifying Risk

LEVEL OF SERVICE FOR WITHDRAWAL MANAGEMENT SERVICES

- **Inpatient Withdrawal Management:** Highest severity, highest risk of severe or complicated withdrawal syndromes. Occurs in-hospital, with medical supervision and the assistance of drug therapy and other interventions
- **Residential Withdrawal Management:** Moderate-to-High severity, moderate risk of severe or complicated withdrawal syndromes. Occurs in-hospital or in a withdrawal management centre. Medical supports may be on-site or available for consultation, mostly on-site nursing support, medications and medical interventions available
  - Level I: symptoms monitored by not-medically-trained staff; medical support remote by consultation or clients are sent to medical support (designated clinic or ER for assessment). Chronic meds, acute injury management medications but limited access to medication for withdrawal management
  - Level 2: essentially the same as Level I, but clients who are on fixed doses of methadone, benzo and opioid tapers are accepted at this level of service
  - Level 3: Symptom monitoring requires medically-trained staff (usually nursing); medical consultation available on a constant basis to monitor and manage all clients in Level I and 2, medical consultation available on a constant basis for medically-assisted withdrawal
- **Community-Based Withdrawal Management:** a variety of day-detox, home-detox and even telephone supported options are available

RISK STRATIFICATION

- Inpatient? Residential? Community-Based Detox? How to decide…
- Look at risk for severe or complicated withdrawal, local resources, clinician experience, past client experience
- Co-occurring experiences: homelessness, crisis, need for other suppports
- Predictors for severe alcohol withdrawal syndrome (seizures, DTs):
    - Older age
    - History of seizure or DTs
    - Severe objective withdrawal symptoms at initial onset
    - Co-morbid medical/surgical illness
    - Presence of dehydration
    - Electrolyte Disturbances (hyponatremia, hypokalemia)
    - Abnormal liver enzymes, s/s liver dysfunction
    - Presence of a structural brain lesion

(Sachdeva, 2015)

SEVERITY OF WITHDRAWAL

Mild Withdrawal:

- 24-48 hours duration
- Mild typical symptoms
- Safely monitored in community, home-based programs, day or telephone detox

Moderate Withdrawal:

- 24-72 hours duration
- Moderate symptoms that typically respond to reassurance, basic supportive and symptom management

Severe Withdrawal:

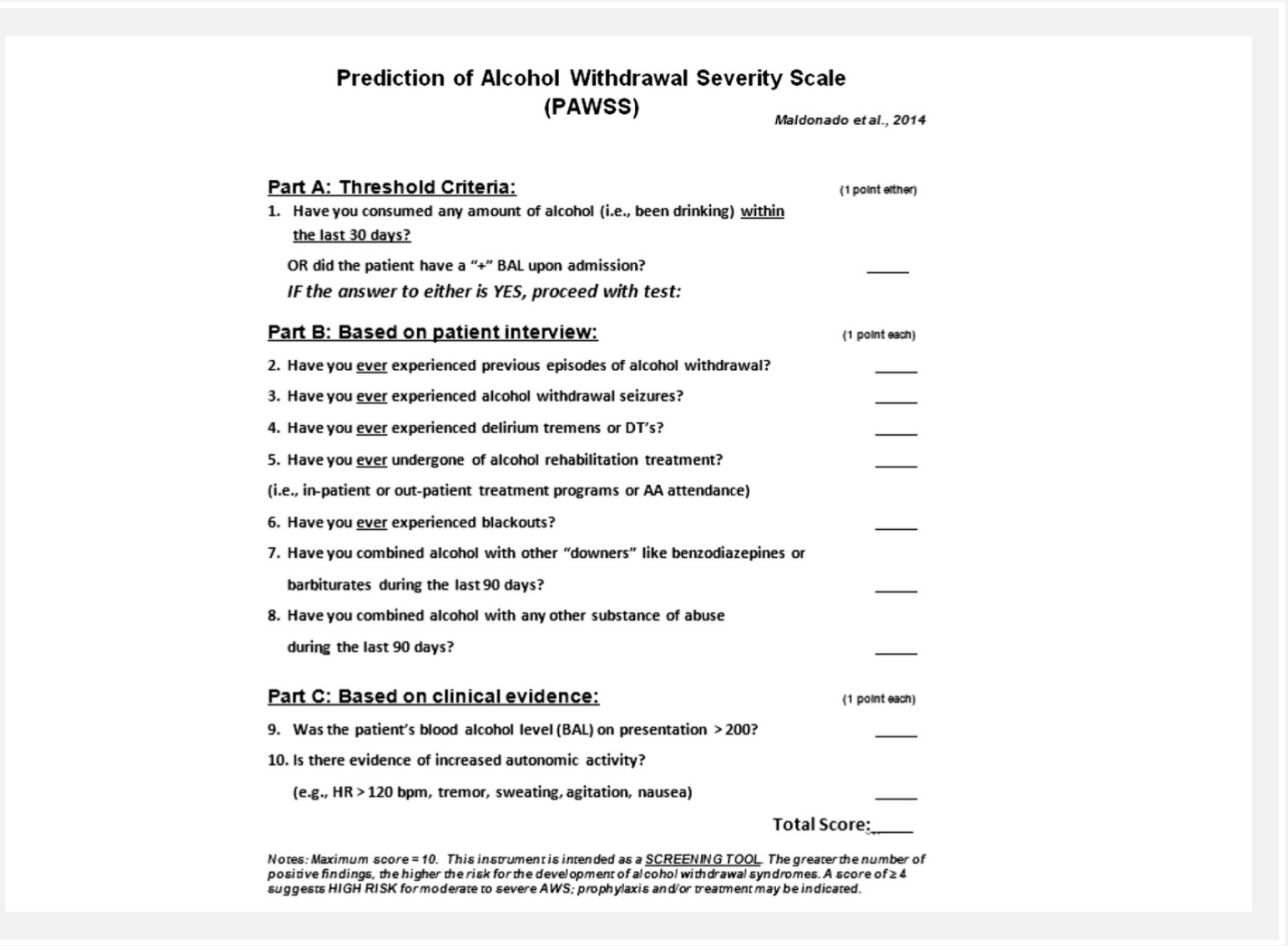
- 24 hours to 14 days duration
- Acute typical symptoms that don't respond to reassurance, require higher level of medical care to avoid complications of withdrawal

(Addictions and Mental Health Ontario, 2014)

PREDICTION OF ALCOHOL WITHDRAWAL SEVERITY SCORE (PAWSS)

- Validated clinical tool to help with risk stratification
- Helps to identify the possibility of developing moderate-to-severe alcohol withdrawal syndrome
- Maximum score is 10, anything > 4 is considered high risk for moderate-to-severe AWS; prophylaxis and/or treatment may be required

(Maldonado et al, 2014; Wood, 2018)



Prediction of Alcohol Withdrawal Severity Scale (PAWSS)

Maldonado et al., 2014

Part A: Threshold Criteria: (1 point either)

1. Have you consumed any amount of alcohol (i.e., been drinking) within the last 30 days?

   OR did the patient have a "+" BAL upon admission? ____

   IF the answer to either is YES, proceed with test:

Part B: Based on patient interview: (1 point each)

2. Have you ever experienced previous episodes of alcohol withdrawal? ____
3. Have you ever experienced alcohol withdrawal seizures? ____
4. Have you ever experienced delirium tremens or DT's? ____
5. Have you ever undergone of alcohol rehabilitation treatment? ____

   (i.e., in-patient or out-patient treatment programs or AA attendance)
6. Have you ever experienced blackouts? ____
7. Have you combined alcohol with other "downers" like benzodiazepines or barbiturates during the last 90 days? ____
8. Have you combined alcohol with any other substance of abuse during the last 90 days? ____

Part C: Based on clinical evidence: (1 point each)

9. Was the patient's blood alcohol level (BAL) on presentation > 200? ____
10. Is there evidence of increased autonomic activity?

    (e.g., HR > 120 bpm, tremor, sweating, agitation, nausea) ____

Total Score: ____

Notes: Maximum score = 10. This instrument is intended as a SCREENING TOOL. The greater the number of positive findings, the higher the risk for the development of alcohol withdrawal syndromes. A score of ≥ 4 suggests HIGH RISK for moderate to severe AWS; prophylaxis and/or treatment may be indicated.

BZD DOSING REGIMES

	Patient Category	Dosing Regime
Fixed Schedule	Appropriate for patients not in a supervised environment (home or community-based withdrawal	Specified doses at fixed intervals, tapered over a set number of days
Symptom-triggered dosing	Appropriate for alcohol withdrawal in a medically supervised or supported setting	Doses administered according to individually-experienced symptoms of alcohol withdrawal and use an assessment tool to dose (CIWA, SHOT)
Loading Dose	Appropriate for alcohol withdrawal in clients with high risk of complicated withdrawal in an inpatient environment (high PAWSS, high CIWA)	Higher doses until alcohol withdrawal subsides

(Saunders et al., 2008; Sachdeva, 2018)

INPATIENT WITHDRAWAL MANAGEMENT

INPATIENT WITHDRAWAL MANAGEMENT

- Patients at risk for seizure or DTs managed in hospital receive symptom-dictated benzo dosing until CIWA-Ar scores fall below severe threshold. Generally poor relapse rates upon discharge.
- Inpatient Management:
- PROS: Ability to monitor patient for signs and symptoms of severe withdrawal, medication adherence and for adverse effects of medications
- CONS: Time and resources are the most common limiting factors for this approach.
- If CIWA-Ar >/= 10, loading dose of:
  - Diazepam 20mg or Lorazepam 4mg
  - Treatment is completed with 2 consecutive CIWA-AR <8 and minimal to no observed resting tremor

RESIDENTIAL WITHDRAWAL MANAGEMENT

PROS/CONS OF RESIDENTIAL DETOX

- Pro – NOT a hospital (assuming it's not in a hospital)
- Pro – monitored and supportive withdrawal management with professional (medical or non-medical) staff who specialize in addictions and withdrawal management
- Con – Medical support – definition, availability of medical staff, emergency management
- Con – limitations in prevention and treatment of moderate to severe dehydration
- Others??

Step 1: Is the patient intoxicated?

- If yes, wait here until they sober up – ensure safety and supportive care, assess intoxication (Intoxication Score)
- If "no" – proceed to Step 2

Step 2: Assess Needs

- Are withdrawal symptoms present? (CIWA, SHOT Score)
- Determine Withdrawal Risk (PAWSS)
- Find out what the patient's goals with drinking are see table

Step 3: Develop A Plan

- Develop a plan with the patient at the center – what resources do they need? What is needed during the stay here at Detox? Withdrawal management? What needs to be done in the community? What follow up is in place? Referrals?

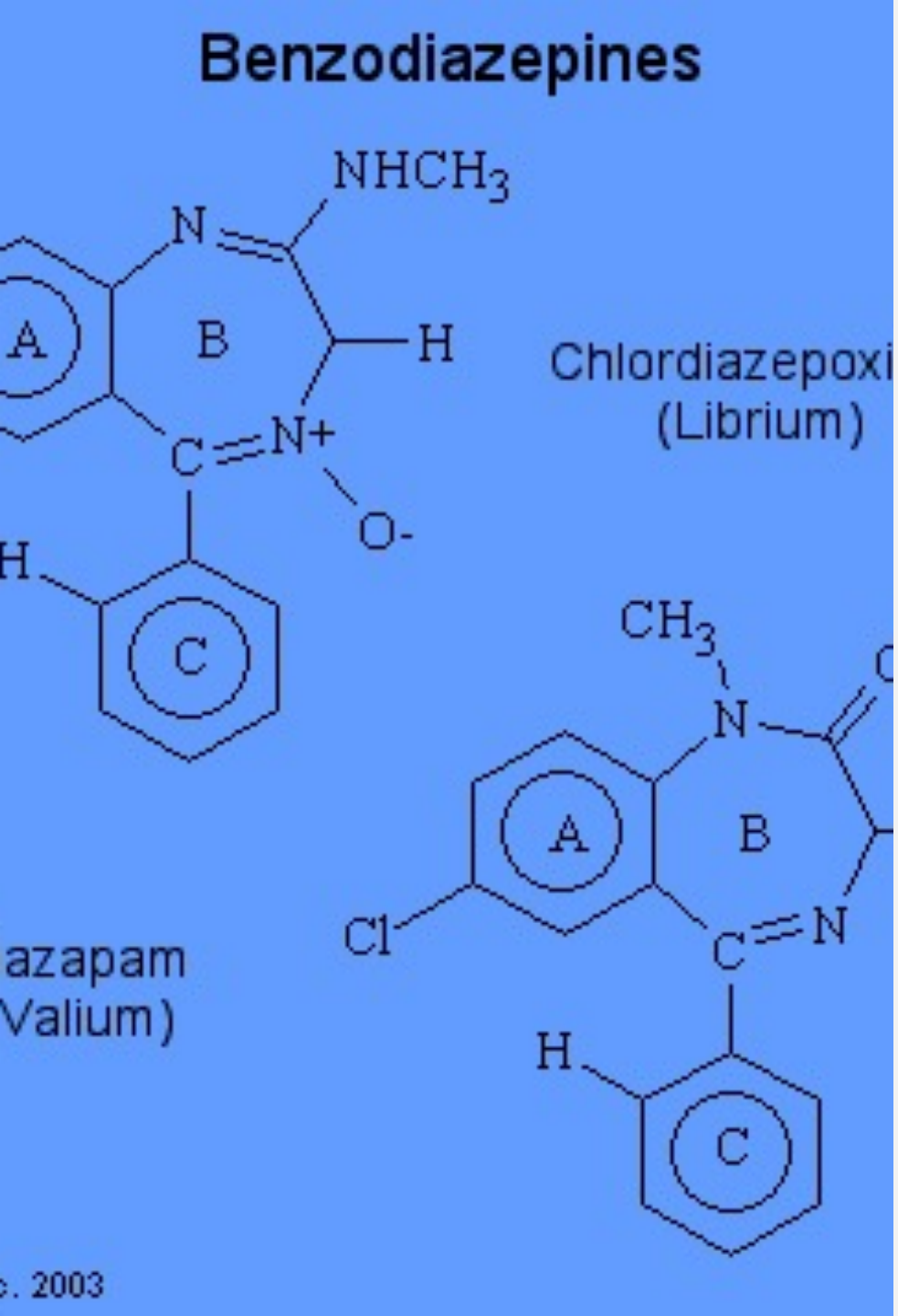
Withdrawal Management		
Sobriety	Continued Drinking	Not Sure

• Patient wants to quit drinking and is ready now:
  • Withdrawal Management
  • Relapse Prevention
  • Treatment Options and Home Support
	• The patient wants to continue drinking
	  • Harm Reduction
	  • Managed alcohol programs
	  • Safe housing
		• They're on the fence or ambivalent
		  • Combine both other options in a way that supports the patient
		  • Discuss alternative goals, like DECREASED DRINKING DAYS, reducing to quit, alternatives to surrogate ETOH use

MEDICATIONS FOR WITHDRAWAL MANAGEMENT

- Use the PAWSS score, or similar, to help predict the severity of withdrawal and to help classify those who may be good candidates for non-benzodiazepine treatment approaches (those at lower risk of complications, avoiding adverse effects associated with benzodiazepines)
- Use of BZDs (Diazepam, Lorazepam) in individuals with seizure risk, signs of severe autonomic hyperactivity
- Non-BZD options for withdrawal management: Gabapentin, Carbamazepine, Valproic Acid
- Anxiety? Hydroxyzine
- Mild autonomic symptoms? Clonidine, Gabapentin
- WKS? Thiamine and MVI supplementation

(Wood, 2018; Sachdeva, 2015)



BENZODIAZEPINES

- In Residential Detox (Level III), we use either a symptom-triggered approach (mostly), occasional loading dose approach (depending on history and risk)
- There's no right or wrong benzo to use
- Choose something that kicks in quick, and lasts longer for most clients (diazepam) which provides less risk of rebound withdrawal symptoms and seizures
- In clients with severely impaired hepatic function, severe lung disease or older adults choose something that is shorter acting, that won't bioaccumulate (lorazepam). These come with a higher risk of rebound seizures.

(Sachdeva, 2015)

NON-BZD OPTIONS

- For those at lower risk of complicated withdrawal, or for those with higher sensitivity to the complications of BZD use – we use anticonvulsants
- Carbamazepine
- Gabapentin
- Valproic Acid*

CARBAMAZEPINE

- Found to be superior to some BZDs at mitigating psychological distress (anxiety, agitation)
- Well-tolerated, side effects short-lived
- Decreases cravings for alcohol after withdrawal, and lowers post-treatment alcohol use in folks with repeated withdrawals
- Superior to BZDs in preventing rebound withdrawal symptoms
- NOT great for folks on lots of meds, hepatic metabolism, lots of interactions
- NOT for treatment of severe withdrawal syndromes (insufficient evidence)
- Fixed dose for 5 days, start in detox:
    - 200 mg QID x 1 day, then 200 TID x 1 day, then 200 BID x 1 day, then 200 daily x 2 then d/c

(Minozzi, 2010; Sachdeva, 2015)

GABAPENTIN

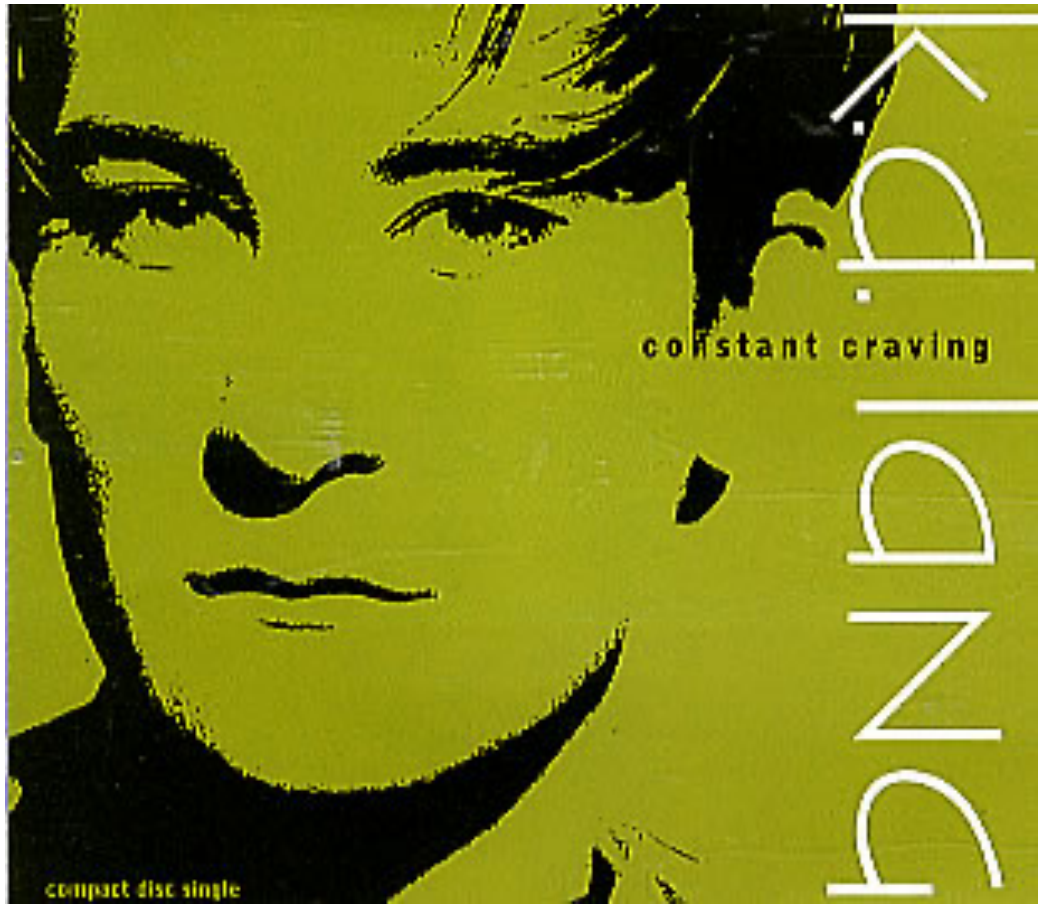
- Similar to Carbamazepine, great efficacy (better than BZDs) for folks that have anxiety and insomnia related to withdrawal
- Treatment can be continued after withdrawal for relapse prevention
- Not well studied for the prevention of seizures or treatment of severe AWS
- Dosing flexible, if naïve do a test dose (100 mg) first then can aggressively titrate to effect (maximum around 3600 mg/24 hours)
- Higher doses may cause ataxia, slurred speech, drowsiness

(Sachdeva, 2015; Bonnet, 2013)

CRAVING

"… an intrusive and overwhelming strong desire or compulsion to use a drug because of the memory of the pleasant rewarding effects superimposed on a negative emotional state…"

(KAKKO, 2019; HAASS-KOFFLER, 2020)



MEDICATIONS FOR URGE REDUCTION/RELAPSE PREVENTION

- Naltrexone
  - Blocks euphoric effects of drinking
  - 25 mg daily x 3 days, then 50 mg daily – can adjust up to 100 mg daily
  - Can have fluctuating doses based on risk
- Acamprostate
  - Antagonizes glutamate receptors which decreases desire to drink
  - 333 mg TID x 3-7 days, then 666 mg TID
  - Smaller folks (< 60kg), folks with renal impairment – stay with smaller dose 333 mg TID
- Others: Gabapentin, Carbamazapine, Disulfiram, Bupropion

HOME-BASED DETOX

PROS/CONS OF HOME DETOX

- Inpatient detox is often not an option for a variety of reasons: previous poor experience with detox facility/ED; lack of social support to leave home/dwelling for extended period etc.
- Home detox is generally up to the prescribers' comfort based on a number of patient factors:
  - Does the patient have adequate social support in the household to control the scheduled medications?
  - Is the patient at risk for severe withdrawal symptoms?
  - Does the patient have co-morbid (or history of previous) benzo/opiate addictions?
  - Is the patient reliable to abstain from all ETOH consumption during the detox?
  - Does the patient understand the danger of continuing to drink while taking benzos?
  - Is there opportunity for the prescriber or team member to follow-up with the patient during the home detox? (by phone or in-person)

FIXED-DOSE BZD DOSING

- Diazepam:
  - Day 1: Diazepam 10mg PO q4H for tremor
  - Day 2: Diazepam 10mg PO q6h for tremor
  - Day 3: Diazepam 10mg PO q12h for tremor
- Lorazepam:
  - Day 1: Lorazepam 1-4mg SL q4-6H for tremor
  - Day 2: Lorazepam 1-4mg SL q6-8H for tremor
  - Day 3: Lorazepam 1-4mg SL q8-12H for tremor

ALTERNATIVE MEDICATIONS

- In those patients who have mild/moderate CIWA-Ar, the option of front-loading with Gabapentinoids has shown benefit to managing withdrawal symptoms and may be preferable to Benzodiazepines for relapse prevention.
  - Gabapentin 1200mg/day
  - Pregabalin 450mg/day
- Carbamazepine has shown similar benefit in the reduction of post-acute withdrawal symptoms for mild/moderate withdrawal.
  - 5 day fixed taper starting with 600-800mg

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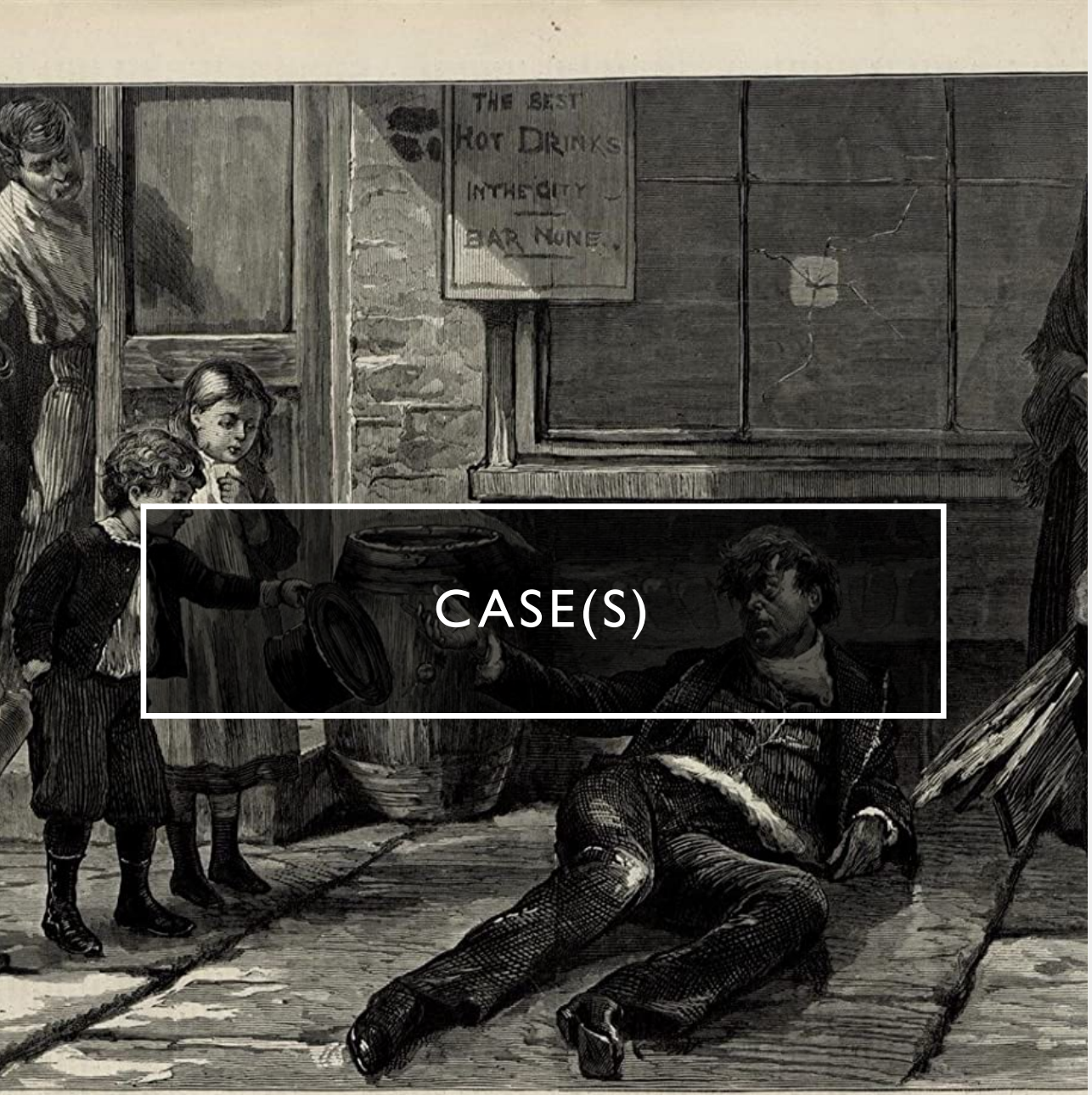
QUESTIONS OR DISCUSSION

CASE(S)

64-year-old lady, drinking daily for 30+ years – has never withdrawn before. No seizure history. Comes to detox because she is ready to stop drinking. Motivated, but needs lots of support – no confidence. Last drink was 30 minutes before admission.



THE POOR DRUNKARD—MORE HELPLESS THAN A CHILD.—[Drawn by C. S. Reinhart.]

CASE(S)

- 38-year-old with severe alcohol use disorder. Frequent detox and emerg admissions, well known to staff. Found passed out in bus shelter when it's -30 outside and brought to detox by ambulance. He's obviously intoxicated on admission, but able to walk into the admission office and he doesn't appear to have any injuries.

CASE(S)

- 42-year-old woman, longstanding severe alcohol use disorder. Has been in and out of detox multiple times lately. She got kicked out of Crossroads for drinking and lost her treatment bed at Dilico because she didn't show up for pre-treatment. She's sober on admission, her last drink was 14 hours ago. Her PAWSS score is 8, her current CIWA is 22. She wants to get sober so she can get her kids back. She's somewhat motivated but has no confidence.