Alcohol Withdrawal

Alcohol Withdrawal Criteria (DSM-V)

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 the cessation of (or reduction in) alcohol use described in Criterion A:

1. Autonomic hyperactivity (e.g., 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 or 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.

Diagnosis of Alcohol Withdrawal

History

Physical exam

Rule out liver disease

Evidence of trauma

Evidence of infection

Laboratory values

Liver associated enzymes

Alcohol level

Alcohol Withdrawal Differential Diagnosis

Acute drug intoxication (eg. Cocaine, amphetamine, hallucinogens)
Sepsis
Thyrotoxicosis
stroke
Hypoglycemia
Intracranial process: trauma
Encephalitis/encephalopathy/eg. Cerebral Malaria
Toxic-metabolic disorders
Alkalosis, hypomagnesemia, hypoglycemia

Alcohol Withdrawal

Syndrome	Onset after last drink
I. Tremulousness	6-36 hours
II. Hallucinations	12-48 hours
III. Seizures	6-48 hours
IV. Delirium Tremens	3-5 days

Stage I: Tremulousness

Symptoms

- Tremor
- Anxiety
- Agitation
- Insomnia
- Diaphoresis
- Anorexia
- Nausea
- Palpitations

Signs

- Tachycardia
- Hypertension
- Hyperreflexia
- Hyperthermia

Hall, et al. The Alcohol Withdrawal Syndrome. Lancet, 1997;349:1897-1900.

Stage II: Alcohol Hallucinations

- Occur within 12-48 hours of last drink
- 3-10 % of withdrawal develop hallucinations
- Duration is variable
- Usually visual (often small creatures)
- Occasionally auditory, tactile ,olfactory

Stage III: Seizures

- Occur within 6 to 48 hours of last drink
- 3 to 15% of untreated patients develop seizures
- Grandmal
- Risk is increased by duration of alcohol abuse
- 40% are single episodes
- 30% of untreated patients go on to delirium tremens

Stage IV: Delirium Tremens

- Begins 3 to 5 days after last drink
- Occurs in less than 5% of withdrawal patients
- Marked by disorientation and global confusion
- Mortality: 2-10%
- Death: cardiovascular, metabolic, and infections

Stage IV: Delirium Tremens cont..

Symptoms

- Confusion
- Disorientation (to time place and person)
- Disorientation sometimes improving during daytime
- Hallucinations (usually optical)
- Hyperresponsiveness

Signs

- Hypertension
- Tachycardia
- Fever

Risk Factors for Delirium Tremens

- Acute concurrent medical illness
- More days since last drink (2 or more days)
- History of seizure or delirium tremens
- Heavier and longer drinking history
- Age >60 increased risk for delirium and falls

Addiction Assessment Tools

CAGE

CAGE
Short, simple and fast test

- Have you ever felt you ought to ***cut*** down on your drinking?
- Have people ***annoyed*** you by criticising your drinking?
- Have you ever felt bad or ***guilty*** about your drinking?
- Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover? ("***eye-opener***")

The CAGE can identify alcohol problems over the lifetime.

Two positive responses are considered a positive test and indicate further assessment is warranted.

Clinical Institute Withdrawal Assessment for Alcohol, revised (CIWA-Ar)

Reliable, validated assessment tool

Brief, easy to use

Score correlates with severity of withdrawal

Good educational tool

Enhances communication between staff

Can guide management decisions

Clinical Institute Withdrawal Assessment for Alcohol Scale-revised (CIWA-Ar)

10 item rating system for alcohol withdrawal severity max of 67 points:

- 0- no symptoms
- 1- Mild
- 4- Moderate
- 7- Severe

BP and PR not found to correlate with severity of withdrawal

Can be given in under 2 minutes

Clinical Institute Withdrawal Assessment for Alcohol Scale-revised (CIWA-Ar)

1. Nausea and vomiting
2. Tremor
3. Paroxysmal sweating
4. Anxiety
5. Agitation
6. Tactile disturbances
7. Visual disturbances
8. Auditory disturbances
9. Headache or fullness
10. Orientation (0-4 points)

CIWA-Ar

A study of the revised version of the CIWA predicted that those a score of >15 were at increased risk for severe alcohol withdrawal

CIWA score <8 — Detoxification may not be needed.
CIWA score 8 to 15 — Patient a candidate for ambulatory medical detoxification,
CIWA score >15 — Inpatient referral is appropriate, especially if there are signs of DT's

Caution

Not *diagnostic*
Must interpret score in clinical context
Co-morbid illness can confound the scoring
Assessment tool
Bottom line: *Interpret*--don't just treat a number
Work together with the nurses

Sedation Scale

1	Anxious, agitated
2	Cooperative
3	Sedated, but responsive
4	Asleep, but responsive
5	Asleep, sluggish response
6	Unresponsive

Management of Alcohol Withdrawal

1. Supportive Care

2. Pharmacologic management
- Benzodiazepines
- Thiamine
- Haloperidol

Beta Blockers
Clonidine
Clomethiazole
Carbamazepine
Magnesium
Ethanol
Phenytoin
Propofol
Gabapentin

Supportive Care

- Quiet environment
- Hydration
- Electrolyte correction
- Nutrition
- Nursing care (reassurance/orientation)
- Monitor for signs/symptoms of withdrawal and for related medical problems

Thiamine

- Evidence of deficiency within 1 week
- 30-80% patients deficient
- Thiamine did not reduce seizures or delirium
- Reduces risk of Wernicke's encephalopathy

  Triad of confusion, ataxia, opthalmoplegia

- Give 50 to 100 mg IV/IM or PO for 3 days
- Recommendation: Yes. Thiamine before glucose.

Alcohol-induced Amnestic Disorder

Wernicke’s syndrome (acute) and Korsakoff’s syndrome (a chronic condition)

Wernicke’s syndrome (alcoholic encephalopathy) is an acute neurological disorder characterized by ataxia, confusion, horizontal nystagmus, lateral rectal palsy, and gaze palsy.

The pathophysiological connection between the two syndromes is thiamine deficiency, caused by nutritional deficiency

Wernicke’s is completely reversible with treatment while only 20% of Korsakoff’s syndrome patients recover.

Haloperidol

When symptoms of Delirium tremens in addition to benzodiazepines and thiamine

Haloperidol 2mg prn (up to 8mg)

Benzodiazepines: the cornerstone

Reduction of alcohol withdrawal symptoms in six prospective trials with:

- Diazepam
- Chlordiazepoxide
- Lorazepam (liver cirrhosis)

Overall reduction of seizures
Reduction of delirium tremens

All were equally efficacious

Benzodiazepines

Route of administration

Oral preferable

- Ease of administration
- More consistent blood levels

Sublingual

- (e.g., surgical patients)

Intravenous

- Severe w/d requiring rapid titration or NPO

Symptom-triggered Therapy

Treatment triggered by severity threshold
One of these Q1 h when CIWA ≥ 8:

Diazepam, 10 - 20 mg
Lorazepam, 2 - 4 mg

2 controlled trials vs. fixed schedule:
Equal efficacy / safety
↓ Dose / side effects / treatment time

The most important aspects of managing alcohol withdrawal with benzodiazepines is careful, frequent observation of the patient to prevent cumulative toxicity.

It is essential that each patient be individually titrated with tranquilizers and repeatedly reevaluated rather than being put on any fixed schedule.

Outpatient treatment

80% outpatient:

CIWA <8 or some with CIWA 8 –15

No hx. of alcohol withdrawal/AW/ , seizures/delirium

No serious medical/surgical problems

No serious psychiatric/drug hx.

Social support

Supervision/housing available

Inpatient treatment

10 -20% of patients:

CIWA > 15 or CIWA 8 –15 + other criteria

↑ Severity (seizures / delirium) and past AW

Major medical/surgical problems

Major psychiatric and/or drug problems

Poor support, homelessness

Pregnancy

Management of AWS

General Measures

Seizure precautions with h/o Sz

Hydration

Thiamine 100mg IM/IV prior to glucose

Correct electrolytes—Mg, Ca, K, PO_4

Treat concurrent illnesses

Restraints prn safety

To do - daily base

See and talk with patient

Assess AWS

Assess psychopathology (orietation, suicidal?)

Adapt medication

Craving

In general

Alcohol withdrawal common complication in patients with alcohol use disorders.

Clinicians must screen for AW

During AW, ↑ excitatory neurotransmission

If untreated AW can be deadly or lead to morbidity

BZD most effective, safest and cheapest treatment

Case 1

RF is a 48yr old male alcoholic with a history of alcohol withdrawal and seizures who was brought in by ambulance after a witnessed generalized, tonic-clonic seizure. His last drink was 1-2 days prior to admission. Over several hours in the Emergency department, he received intermittent doses of Diazepam PO and IV. He was ataxic and therefore admitted to hospital.

He required higher doses of benzodiazepines over the second hospital day. Later the patient was found agitated, diaphoretic, tremulous, disoriented, and actively hallucinating consistent with DTs (CIWA 30)

How would you continue treatment?

The patient has to be constantly monitored by a nurse,
the patient should be sedated but you should be able to wake him up.

Continue to titrate patient with diazepam.

Treat patient's delirium with haloperidol (start with
2-5mg iv., increase up to 10mg/daily)

If psychotic symptoms subside taper haloperidol and diazepam within the next 3-4 days down.

Monitor patient for medical problems: heart, lungs (pneumonia), liver, check the electrolytes.
If medical problems become unmanageable patient has to be transferred to ICU.

What is still missing?

Please give your answer below

What is still missing?

You are correct, they forgot to give thiamine right from the beginning.

That kind of patient is in danger to develop Wernicke Syndrom and later Korsakoff Syndrome (= amnestic syndrome as before we discussed please revise it .

Case 2

AB is a 30yr old housewife, her husband has a good job as a salesman but he often has to work outstation. She often feels lonely. About five years ago she started to drink every day in the evening 2 glasses of wine. She felt better and could at first sleep better. Since she enjoyed the wine she increased the consumption. Since about one year she drinks 1-1,5 l of wine every day. She starts in the morning, which she does secretly.

She still can do her housework. If she does not drink in the morning she feels very restless. Lately her husband found out that she drinks already in the morning and begged her to stop drinking. She tried because she loves her husband, but she did not succeed. Now she is looking for help?

How would you manage the patient?

- Now your turn is come

Please students list down how you are going to manage your patient

References:

Diagnostic and Statistical Manual of Mental Disorders, 5th ed.
Kaplan

Olmedo et al. Withdrawal Syndromes. Emergency Med Clinics of North America 2000;18(2): 273-287

STAY SAFE AND HOME