ALCOHOL WITHDRAWAL

(Last updated 07/23/2019; Reviewed by: Amit Vasireddy, MBBS)

PRESENTING COMPLAINT: Anxiety, agitation, restlessness

FINDINGS

- **A** Check Airway
- **B** ↑ RR
- **C** ↑ HR, ↑ BP,
- **D** Variable altered, visual, auditory, or tactile hallucinations
- **E** Fever, tremors, agitation
- **L_{PC}** CBC(↓ Hb), Electrolyte imbalance (↓ Na, K, Mg), AST/ALT 2:1,↑ GGT, Lipase
- **U_{PC}** Normal/cirrhotic/hepatomegaly

***V** (verbal), **P** (pain), **U** (unconsciousness), **D** (delirious)

U_{PC} (point of care ultrasound) **L_{PC}** (point of care labs)

OTHER HISTORY

- Minor withdrawal (6-48 hrs after last drink)
- Mild anxiety (↑/hr anxiety)
- Withdrawal seizures
  - Seizures occur within 48 hours of alcohol cessation
  - Occur either as a single, generalized, tonic-clonic seizure or as a brief episode of multiple seizures
- Alcoholic hallucinosis (12–48 h after last drink)
  - Typically visual
- Delirium tremens
  - Occurs 24 to 72 hours after alcohol cessation
  - Hyper adrenergic state, disorientation, tremors, diaphoresis, impaired attention/consciousness, visual and auditory hallucinations

DIFFERENTIAL DIAGNOSIS

- Traumatic brain injury, metabolic or drug induced encephalopathy (including hepatic), delirium, meningitis, sepsis, intracranial pathology

OTHER INVESTIGATIONS

- **Labs**
  - Complete blood count, alcohol and electrolyte levels, liver function tests, urine drug screen

- Detailed drinking history
  - Amount, duration, and time since last drink
  - History of alcohol withdrawal
- When overuse of alcohol is suspected but drinking history is unclear, testing for elevated values of carbohydrate- deficient transferrin, gamma-glutamyl transferase, or AST/ALT ratio can help make the diagnosis of alcohol overuse and dependence more clear
- Consider CT head and lumbar puncture to rule out differential diagnoses that can mimic or co-exist with alcohol withdrawal

THERAPEUTIC INTERVENTIONS

- **Management**
  - Quiet and protective environment
  - Monitoring
    - Blood pressure, body temperature, heart rate
  - If the patient is dehydrated, give isotonic IV fluid replacement when oral fluid cannot be tolerated or while NPO to prevent aspiration
  - Deficiencies of glucose, potassium, magnesium, and phosphate needs to be corrected
  - Sedation using benzodiazepines until withdrawal is complete
    - Diazepam: 10 mg PO q1-2hr or 5-10 mg IV or IM q20-120 min
    - Lorazepam: 2 mg PO q2hr or 1-2 mg IV IM q5-120 min
    - Consider adjunctive dexmedetomidine or clonidine
    - Consider addition of longer-acting benzodiazepine (chlordiazepoxide)
  - Thiamine: 100 mg/day IV or Oral
    - Prophylactic administration of thiamine, folate, and pyridoxine intravenously is recommended before starting any carbohydrate-containing fluids or food
  - Barbiturates, specifically phenobarbital, can be very effective in refractory delirium tremens patient population when given with a benzodiazepine
    - Phenobarbital: 130 to 260 mg IV, repeated every 15 to 20 minutes, until symptoms are controlled

ONGOING TREATMENT

- **Further treatment**
  - Sedative drugs to help ease withdrawal symptoms
  - Patient and family counseling to discuss the long-term issue of alcoholism
  - Testing and treatment for other medical problems linked to alcohol use
- **Follow up**

- Counselling and self-help and groups, including Alcoholics Anonymous, may be helpful
- In those discharged from secondary care, involvement of the patient's GP (with their permission) should be encouraged
- Any co-existing medical and psychological problems should also be addressed

PREVENTION

- Patients with history of heavy alcohol consumption, consider prophylaxis with oral chlordiazepoxide, even for those with minimal/no symptoms who are admitted to the ICU for other reasons

CAUTION

- The prophylactic administration of thiamine, folate, and pyridoxine intravenously is recommended before starting any carbohydrate-containing fluids or food

REFERENCES & ACKNOWLEDGMENTS

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