Complicated Acute Alcohol Withdrawal

Guest: Bryan Hayes

Key Article

- *Ferreira JA, et al. Approach to the complicated alcohol withdrawal patient. J Intensive Care Med 2017;32(1):3-14.*

Benzodiazepines

- There is virtually no data supporting escalation of bolus benzodiazepine therapy compared with continuous infusion.
- 2 studies have evaluated infusion and bolus therapy and found less intubations, shorter duration of mechanical ventilation, shorter ICU LOS, and less pneumonia with bolus approach.
- Despite data from Bellevue and others supporting extremely large doses of benzodiazepines, it seems that many patients reach a threshold at which benzodiazepine efficacy diminishes and alternative therapies should be explored - we don't know what that threshold is for individual patients.

Propofol

- Propofol is a reasonable option, given that it has not only GABA agonist effects, but also NMDA antagonist properties.
- Be careful…

Barbiturates

- Unlike benzodiazepines, barbiturates possess GABA independence, meaning they don't rely on circulating GABA for efficacy.
- Respiratory depression associated with barbiturate use has not been consistently documented in the AWS literature and is likely rooted in its use in alternative disease states.
- Rosenson, et al. 2013 - 10 mg/kg IV bolus of phenobarbital or placebo in conjunction with symptom-triggered benzodiazepine regimen. This front-loaded technique resulted in reductions in ICU admission, requirement of lorazepam infusions, and overall lorazepam requirements.
- Gold, et al. 2007 - Patients requiring >100 mg of diazepam/hr (40 mg of lorazepam/hr) received escalating doses of 65, 130, and 260 mg/dose of phenobarbital based on response duration. Fifty-eight percent of the population escalated to require phenobarbital. This combination of aggressive benzodiazepine dosing and phenobarbital was associated with lower rates of mechanical ventilation.

- Duby, et al. 2014 - implemented the protocol utilized by Gold et al in their ICUs, also found a reduction in ICU LOS as well as length and requirement of mechanical ventilation.

Dexmedetomidine

- See Bryan's outstanding discussion at https://www.aliem.com/2013/dexmedetomidine-precedex-as-adjunct-for/

Neuroleptics

- Use of neuroleptic agents, including antiepileptics and antipsychotics, as adjunctive therapy lacks ample literature to support their regular use in severe AWS.
- Valproic acid appears to be the most promising as an adjunctive therapy.

Ketamine

- Only one study exists and was published recently (Wong A, et al. *Ann Pharmacother* 2015;49(1):14-9.)
    - The study was a retrospective review of 23 adult patients who were administered ketamine specifically for management of AWS.
    - The mean time to initiation of ketamine from first treatment of AWS, and total duration of therapy were 33.6 and 55.8 hours, respectively.
    - Mean initial infusion dose and median total infusion rate during therapy were 0.21 and 0.20 mg/kg/h, respectively.
    - There was no change in sedation or alcohol withdrawal scores in patients within 6 hours of ketamine initiation.
    - The median change in BZD requirements at 12 and 24 hours post-ketamine initiation were -40.0 and -13.3 mg, respectively.
    - The mean time to AWS resolution was 5.6 days.
    - There was one documented adverse reaction of oversedation, requiring dose reduction.