Trauma Delirium Management Guideline

Monitoring and Treatment

I. The confusion assessment method for the ICU (CAM-ICU) should be monitored each shift and reported to the team during rounds
   a. CAM-ICU should NOT be reported as unable to assess unless RASS <-3
   b. Consider RASS and CAM-ICU status when choosing treatment options
      i. Hypoactive delirium – CAM positive and RASS 0 to -3
         • Non-pharmacological management
         • Minimize sedating medications
      ii. Hyperactive or mixed hyper/hypoactive delirium – CAM positive and RASS -3 to +4
         • See algorithm

   b. Goal RASS should be specified on ALL patients

II. If CAM positive, consider differential diagnosis (hypoxia, sepsis, CHF, over-sedation, deliriogenic medications)

Non-pharmacologic management**
- Orient patient (provide visual/hearing aids, re-orient, encourage communication, encourage proper sleep hygiene, and provide cognitively stimulating activities during the day)
- Environment (Mobilize patients early and often, provide familiar objects in patient’s room, minimize noise at night, and remove unnecessary lines/drains)
- Adjunctive (perform SATs daily, provide adequate pain management, correct dehydration and electrolyte disturbances)

Deliriogenic Medications**
- Benzodiazepines
- Anticholinergics (diphenhydramine, glycopyrrolate, metoclopramide, H2 blockers, TCAs, cyclobenzaprine)
- Steroids
- Pain medications (if pain is not cause of agitation/delirium)
  o Decrease opioid dose
  o Utilize multimodal pain regimen

Special Considerations
- Geriatric population
  o Reduced antipsychotic (50%) doses should be initially used in patients > 65 years old
  o Avoid haloperidol doses >5mg or quetiapine doses >100mg in patients > 65 years old
**Hyperactive Delirium**
(includes mixed delirium with hyperactive component, ex: attempting to wean sedation)

**Delirious (CAM-ICU positive)**

- Ensure adequate sleep and pain control
- Quetiapine 50mg q8-12hrs or olanzapine 5mg q 8-12hrs
- Haloperidol 1-10mg IV q4h prn breakthrough agitation

No response at 24hrs or multiple IV doses of haloperidol

- Reassess analgesia
  - ↑ quetiapine dose to 100mg q8-12hrs or olanzapine to 10mg q8-12hrs***
  - Continue haloperidol breakthrough

**CAM +, RASS +1 to +2**

- Ensure adequate pain control
- Haloperidol 5-20 mg IV/IM q15min prn extreme agitation
- Start sedation if none currently infusing
- Bolus (if receiving propofol) and/or increase rate of current sedative

**CAM +, RASS +3 to +4**

- Ensure adequate pain control
- Haloperidol 5-20 mg IV/IM q15min prn extreme agitation
- Start sedation if none currently infusing
- Bolus (if receiving propofol) and/or increase rate of current sedative

Intubated/Trached?

**Extubated**

- Ensure adequate pain control
- Haloperidol 5-20 mg IV/IM q15min prn extreme agitation
- Consider dexmedetomidine

**Traumatic Brain Injury**

- Follow algorithm (see left) for escalation of antipsychotics.
- Consider starting IR Depakote/valproic acid 500 mg q8-6h (titrate up to max 60mg/kg/day, if needed), †
- Consider early use of propranolol 10-20mg q8-6h (max 360 mg/day) for agitation related to neurologic storming.

**Consider Differential Diagnosis (Sepsis, alcohol withdrawal, etc)**

- Remove Deliriogenic Medications**
- Non-pharmacologic Protocol- Always attempt non-pharmacologic measures initially

**No response at 24hrs or multiple IV doses of haloperidol**

- Reassess analgesia
  - ↑ quetiapine dose to 200mg q6-12hrs or olanzapine to 10mg q6-8hrs
  - Continue haloperidol breakthrough

**CAM +, RASS +1 to +2**

- Ensure adequate pain control
- Haloperidol 1-10mg IV q4h prn breakthrough agitation

**RASS remains ≥ +3 with multiple doses of IV haloperidol**

- Consider switching to alternate sedative

**Move to CAM +, RASS +1 to +2 algorithm at any point as needed**

***Maximize 1 agent PRIOR to altering delirium/agitation regimen.

***If refractory to all above measures, may trial Geodon (max: 40mg BID)
  - If unsuccessful, consult psychiatry for additional recommendations.

***Monitor QTc monitoring if receiving multiple QT-prolonging medications. Modify QT-prolonging medications if QTcF > 500. Avoid large doses of haloperidol in traumatic brain injury patients

†Considerations for Depakote: Obtain baseline LFTs (use with caution in patients with liver disease) and weekly LFTs while on therapy, only obtain valproate level if concerned for toxicity
References:


**CAM ICU Assessment**

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Jill Streams, MD
Bradley Dennis, MD
Abby Luffman, MSN, APN, AGACNP-BC
Bethany Evans, RN, MSN, ACNP-BC
Leanne Atchison, PharmD