Acute Movement Disorder Guideline

Inclusion Criteria: Patient with acutely worsening Movement Disorder Symptoms

Exclusion Criteria: Not a previously known patient; Overarching medical issue (i.e. respiratory distress, wound dehiscence, post-op management, sepsis)

Patient with Acutely worsening Movement Disorder Symptoms
Notify/Consult Neurology

- **Acutely decompensating requiring transfer to ICU for management**
  - Initiate high dose scheduled Benzodiazepines or Midazolam drip
  - Add daily CKs to lab work
  - May require Midazolam or Ketamine at anesthetic doses
    - Exhaustive search for trigger and treat
      - Continue established individualized care for patient
    - Ensure aggressive pain management

- **Symptoms are causing them to become a physical danger to themselves or others**
  - Administer PRN Benzodiazepine
    IV access: Diazepam
    No IV access: Intranasal Midazolam
    - No Improvement or Worsening Movements: May administer 2nd Benzodiazepine dose 10 minutes after 1st dose
      IV access: Midazolam
      No IV access: Intranasal Midazolam
      - No Improvement or Worsening Movements after 2nd Benzodiazepine: Transition to ICU for higher level care including Midazolam drip
      - Improvement: Continue established individualized care for patient
    - Improvement: Continue established individualized care for patient
      - Add CK daily

- **Increase in movements requiring intervention but otherwise stable**
  - Add CKs to routine lab work or q72hrs
  - Assess underlying trigger and treat
  - Increase or add scheduled Benzodiazepine
    - Consider addition of Clonidine to decrease agitation

Medication Considerations on Next Page

Approved Evidence Based Medicine Committee
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Reassess the appropriateness of Care Guidelines as condition changes and 24 hrs after admission. This guideline is a tool to aid clinical decision making. It is not a standard of care. The physician should deviate from the guideline when clinical judgment so indicates.

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Medication Considerations

Benzodiazepines: Recommend aggressive dosing to adequately control movements

- Clonazepam: 0.125mg PO/Gtube BID-TID, increase by 0.25 - 0.5mg/day q3 days. Max: 20 mg/day
- Diazepam (preferred due to rapid onset of action): 0.2mg/kg/dose IV q4hr PRN, increase up to 10mg q4h IV PRN or scheduled
- Midazolam:
  - Intranasal 0.2mg/kg/dose – may increase to 0.8mg/kg/dose for benzodiazepine tolerate patients. Max 10mg/dose. May repeat x1 after 10 minutes.
- Lorazepam: 0.1mg/kg IV q2hr PRN. Max 4mg/dose.
- Flumazenil: available for rescue

Special considerations:

- These patients are often benzodiazepine tolerant and hence may require high doses to achieve therapeutic effect, this also limits side effects.
- Respiratory depression and sedation are side effects to monitor for. If decreasing respiratory rate and oxygen saturation consider monitoring of end-tidal CO_2 to assess hypoventilation, particularly if giving supplemental oxygen. If concerns for respiratory symptomatology consider transfer to PICU for positive pressure ventilation therapy and possible intubation as indicated.
- Avoid neuroleptics without discussion with movement team. If given add antimuscarinic.
  - Consider prolactin level prior to administration
- Titration of medication or progression to next step is based on need to abate movements either due to risk of patient harming themselves or others, or dystonic storm (as assessed by trending CK)
  - If persistent concerns at maximum dosing of clonazepam/diazepam escalate to ICU for continuous infusions

For consideration in ICU (in order of recommendation):

- Midazolam: 0.03 - 0.2 mg/kg/hr IV continuous infusion
- Dexmedetomidine: 1.5 mcg/kg/hr IV (titrating to 2mcg/kg/hr)
- Ketamine: 0.5 - 2mg/kg/dose IV x1, then 5 - 60mcg/kg/min IV
- Propofol: 150 mcg/kg/min, titrating to 250 mcg/kg/min

Triggers to consider: pain, constipation, infection, headaches.

- May require dental evaluation, KUB, skeletal survey, etc.

References

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