# HALOPERIDOL LACTATE (INTRAVENOUS) - ICU/ED

PURPOSE: To outline the management of patients receiving intravenous haloperidol.

SUPPORTIVE DATA:

Haloperidol **(a Black Box Warning medication)** is a neuroleptic drug with proven efficacy in treating delirium/acute agitation in the critically ill. QT prolongation and Torsades de Pointes are very rare but serious complications of haloperidol given intraveneously or at high doses. Caution is advised in treating patients who have QT prolonging conditions, including electrolyte imbalance (particularly hypokalemia and hypomagnesemia), have underling cardiac abnormalities, hypothyroidism, or familial long QT syndrome, or when taking drugs known to prolong QT interval. Patients receiving intravenous haloperidol shall be monitored for Torsades de Pointes or prolonged QT interval. Doses greater than 35 mg per day increase the risk of Torsades de Pointes.

The onset of action of haloperidol given intravenously is 3 to 20 minutes, peak 15 to 45 minutes, and half-life 14 to 20 hours. Studies have shown IV haloperidol is compatible with $D_5W$.

ASSESSMENT:

1. Assess the following prior to administration:
   - Level of consciousness
   - Vital signs (unless agitation precludes ability to obtain)
   - Oxygen saturation (unless agitation precludes ability to obtain)
   - Presence of anxiety or agitation
2. Ensure that baseline 12 lead ECG (as ordered) has been done during hospital admission and that QTc is normal (less than 430 msec for men, less than 450 msec for women) (Inpatients only).
3. Provide continuous ECG monitoring for a minimum of 1 hour after administration AND do ONE of the following prior to or within 60 minutes after administration (or when patient is sedated enough to perform ECG/cardiac monitoring, which may require multiple doses):
   - Document the QTc from cardiac monitor's QT monitoring system (x1) and ensure that QT and QTc alarms are set
   - Obtain 12 lead ECG (as ordered), notify physician when ECG is done to evaluate QT interval
4. Assess for adverse drug reactions within 30 minutes of IV administration then a minimum of every 2 hours.
   - Extrapyramidal (dystonic) reaction
     - Involuntary facial movements
     - Tongue protruding or fasciculation
     - Uncontrolled rolling back of the eyes (oculogyric crisis)
     - Neck stiffness or torticollis (sustained twisting or frequent jerking of the neck)
     - Twitching/spasms
     - Parkinson-like symptoms
   - Seizures (especially in alcoholics and epileptics)
   - Respiratory distress
   - Torsades de Pointes, 3rd degree heart block
   - Hypotension
   - Neuroleptic Malignant Syndrome (altered mental status, hyperthermia,

muscle rigidity, tachycardia, hypertension or labile BP, tachypnea)

5. Ensure order includes:
   - Dose
   - Route
   - Frequency
   - Desired Richmond Agitation Sedation Scale (RASS)score if on mechanical ventilation
   - Purpose
6. Assess sedation level by obtaining RASSscore a minimum of every 4 hours.
7. Assess as drawn: CPK, $K^+$, $Ca^{++}$, $Mg^+$, Phosphorus levels.

SAFETY:

**8. Use haloperidol lactate injection preparation. DO NOT use haloperidol decanoate.**

ADMINISTRATION:

9. Use the following administration guidelines:
   - Administer 5 mg over 1 minute
   - Allow 15 minutes between doses
   - Maximum bolus dose 5 mg
10. **Do not infuse in an IV line with heparin** due to precipitate formation.
    - For saline locks – flush with 2 mLs of $D_5W$ or normal saline before and after each haloperidol injection.
11. **DO NOT USE Epinephrine** in haloperidol-induced hypotension. Haloperidol reverses epinephrine's vasopressors effect.
12. Use with caution in patients with cardiac, renal, or hepatic dysfunction, thyrotoxicosis, and/or history of seizures.

ANTIDYSTONIC DRUG:

13. Administer antidystonic drugs as ordered (benztropine [Cogentin], diphenhydramine [Benadryl]). Order to include:
    - Dose
    - Route
    - Frequency

REPORTABLE CONDITIONS:

14. Hold haloperidol and notify physician immediately for:
    - QTc greater than 450 msec
    - Respiratory distress
    - Hypotension
    - ECG changes (Torsades de Pointes or 3rd degree heart block)
    - Extrapyramidal (dystonic) reaction
    - Seizures
    - Signs/ symptoms of Neuroleptic Malignant Syndrome
    - Altered $Ca^{++}$, $Mg^+$, $K^+$, Phosphorus and CPK levels

PATIENT/FAMILY TEACHING:

15. Instruct on the following:
    - Purpose of the drug
    - Potential side effects
    - Need to notify nurse for the following:
      - Seizures
      - Difficulty breathing
      - Extrapyramidal (dystonic) reaction

ADDITIONAL PROTOCOLS:

16. Implement the following protocol as indicated:
    - Agitated Patient

DOCUMENTATION: 17. Document in accordance with documentation standards.

| Initial date approved:<br>08/03 | Reviewed and approved by:<br>Critical Care Committee<br>Professional Practice Committee<br>Pharmacy & Therapeutic Committee<br>Nurse Executive Committee<br>Attending Staff Association Executive Committee | Revision Date:<br>03/05, 08/08, 02/11, 05/16 |
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LAC+USC Clinical Resources: Micromedix and UptoDate drug info (Lexi-com)

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