Quick Reference for the Treatment of Acute Agitation

Goals of pharmacologic therapy of acute agitation:
- Produce calming effect quickly without excessive sedation
- Provide early treatment of underlying psychosis
- Minimize treatment-related adverse events
- Assure patient and staff safety

Options for Management of Acute Agitation with Intramuscular Therapy

Clinical Pearls
- For psychotic agitation, if initial antipsychotic is ineffective, addition of a benzodiazepine is preferred over additional doses of antipsychotic. However, do not combine IM olanzapine with IM lorazepam due to the risk of respiratory depression.
- If appropriate, offer oral medication first and incorporate the patient in the medication decision.
- Rule-out possible causes of agitation:
  - Medical complications (ie. hyper- or hypoglycemia, electrolyte disturbance, renal or hepatic failure, thyroid or adrenal disorders, Wernicke’s encephalopathy, hypotension, heart failure, neurologic disorders [stroke], infection)
  - Substance intoxication or withdrawal
  - Medication causes (ie. steroids, anticholinergics, barbiturates, amphetamines, antipsychotic-induced akathisia)
- Allow adequate time for clinical response between doses (see table on page 2).
- After treatment with IM agents, monitor vitals and clinical status at regular intervals.
- Second generation antipsychotic agents have a lower risk of EPS than haloperidol but have demonstrated similar and comparable efficacy in treating acute agitation.
- For psychotic agitation, combining a benzodiazepine and a typical antipsychotic is more effective than typical antipsychotic monotherapy and may allow for decreased doses of the antipsychotic medication.
- Concurrent administration of diphenhydramine with haloperidol is not recommended as it requires two separate injections and increases the risk of over sedation and interactions with other medications.
- Use lower starting and maximum doses in the elderly and child and adolescent population.

Key
HLD: haloperidol
LRZ: lorazepam
OLZ: olanzapine
ZIP: ziprasidone
Comparison of IM Treatment Options

<table>
<thead>
<tr>
<th>Medication</th>
<th>Typical Dose</th>
<th>Max Single Dose</th>
<th>Repeat Dosing</th>
<th>Max Adult Dose/ 24hrs</th>
<th>Time to Onset</th>
<th>Time to Peak Cp</th>
<th>Half-life (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorazepam</td>
<td>1-2mg</td>
<td>4mg</td>
<td>0.5 hour</td>
<td>12mg</td>
<td>20-30 min</td>
<td>1-3 hr</td>
<td>14</td>
</tr>
<tr>
<td>Haloperidol lactate</td>
<td>5-10mg</td>
<td>10mg</td>
<td>1 hour</td>
<td>40mg</td>
<td>30-60 min</td>
<td>20 min</td>
<td>20</td>
</tr>
<tr>
<td>Chlorpromazine1,2</td>
<td>25-50mg</td>
<td>100mg</td>
<td>2 hours</td>
<td>400mg</td>
<td>--</td>
<td>1-4 hr</td>
<td>2-30</td>
</tr>
<tr>
<td>Ziprasidone2</td>
<td>10mg, 20mg</td>
<td>20mg</td>
<td>2 hours</td>
<td>40mg</td>
<td>15 min</td>
<td>1 hr</td>
<td>2-5</td>
</tr>
<tr>
<td>Olanzapine2,3</td>
<td>10mg</td>
<td>10mg</td>
<td>2 hours3</td>
<td>30mg</td>
<td>15-45 min</td>
<td>15-45 min</td>
<td>30</td>
</tr>
</tbody>
</table>

1IM chlorpromazine is not recommended for the management of acute agitation. There are significant risks of QTc prolongation, hypotension, reduction in seizure threshold, a slow onset of effect, and risk of local irritation at the injection site.
2Reconstitution required before administration.
3Monitor for orthostatic hypotension prior to administration of repeat dosing.

Comparison of Oral Agents for Acute Agitation

<table>
<thead>
<tr>
<th>Medication</th>
<th>Typical Dose</th>
<th>Repeat Dosing (hours)</th>
<th>Max Adult Dose/ 24hrs</th>
<th>Estimated Time of Onset (minutes)</th>
<th>Time to Peak Cp (hours)</th>
<th>Half-life (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorazepam</td>
<td>1-2mg</td>
<td>2</td>
<td>10mg</td>
<td>20-30</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Haloperidol</td>
<td>5-10mg</td>
<td>x</td>
<td>40mg</td>
<td>x</td>
<td>2-6</td>
<td>14-37</td>
</tr>
<tr>
<td>Chlorpromazine1</td>
<td>25-50mg</td>
<td>x</td>
<td>2000mg</td>
<td>x</td>
<td>2.8</td>
<td>6</td>
</tr>
<tr>
<td>Ziprasidone2</td>
<td>20-40mg</td>
<td>x</td>
<td>240mg</td>
<td>x</td>
<td>6-8</td>
<td>7</td>
</tr>
<tr>
<td>Olanzapine ODT</td>
<td>5-10mg</td>
<td>2</td>
<td>30mg</td>
<td>≤ 60</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Risperidone m-tab</td>
<td>1-2mg</td>
<td>2</td>
<td>8mg</td>
<td>≤ 60</td>
<td>~1</td>
<td>20</td>
</tr>
<tr>
<td>Risperidone soln.3</td>
<td>1-2mg</td>
<td>2</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*Not studied as a treatment for acute agitation and aggression.

*Chlorpromazine is expressed as having limited, poor, and outdated data as treatment for acute agitation.

*Oral ziprasidone absorption is significantly decreased without administration with a meal (250-500 calories).

*When given in combination with IM lorazepam.

References


