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 (e.g., 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 (e.g., 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.

See table on page 2 for dosing frequency and details.
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</td>
<td>20mg</td>
<td>2 hours⁶</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>

¹ 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.
² Reconstitution required before administration.
³ Monitor 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>1</td>
<td>40mg</td>
<td>30</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>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Not studied as a treatment for acute agitation and aggression.
² Chlorpromazine is expressed as having limited, poor, and outdated data as treatment for acute agitation.
³ Oral ziprasidone absorption is significantly decreased without administration with a meal (250-500 calories).
³ When given in combination with IM lorazepam; entire bottle would be dispensed and charged regardless of dose administered.

References


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