once recovery begins, the rate of recovery is
co-induction agents (e.g., fentanyl and midazolam), GOOD or EXCELLENT conditions for tracheal intubation
of cisatracurium besylate is:

Concentration [mg/L] may prolong the clinically effective duration of action of initial and maintenance doses, and decrease
acid for 5 mL and 20 mL vials. The 5 mL vial contains cisatracurium besylate, equivalent to 2 mg/mL cisatracurium.

Table 1. Pharmacodynamic Dose Response* of Cisatracurium Besylate During Opioid/Nitrous Oxide/Oxygen Anesthesia

<table>
<thead>
<tr>
<th>Concentration [mg/L]</th>
<th>Percent 90% Block</th>
<th>MAP -70%</th>
<th>HR +70%</th>
<th>SE -20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.15</td>
<td>60</td>
<td>70</td>
<td>75</td>
<td>65</td>
</tr>
<tr>
<td>0.25</td>
<td>80</td>
<td>85</td>
<td>70</td>
<td>90</td>
</tr>
<tr>
<td>0.35</td>
<td>90</td>
<td>95</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 2. Study of Tracheal Intubation Comparing Two Doses of Cisatracurium (Thiopental Anesthesia)

<table>
<thead>
<tr>
<th>Dose [mg/kg]</th>
<th>Good:</th>
<th>Fair:</th>
<th>Percent</th>
<th>MAP -70%</th>
<th>HR +70%</th>
<th>SE -20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.15</td>
<td>29/30</td>
<td>7/30</td>
<td>57%</td>
<td>80</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>0.25</td>
<td>28/30</td>
<td>8/30</td>
<td>60%</td>
<td>85</td>
<td>100</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 3. Study of Tracheal Intubation for Pediatrics Stratified by Age Group (0.15 mg/kg Cisatracurium
results are summarized in Table 4.

In children (2 to 12 years) cisatracurium has a lower ED 95 than in adults (0.04 mg/kg, halothane/nitrous

Table 4. Study of Tracheal Intubation for Pediatrics Stratified by Age Group (0.15 mg/kg Cisatracurium

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Good:</th>
<th>Fail:</th>
<th>Percent</th>
<th>MAP -70%</th>
<th>HR +70%</th>
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</thead>
<tbody>
<tr>
<td>Pediatric</td>
<td>94%</td>
<td>5%</td>
<td>83%</td>
<td>80</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Adult</td>
<td>97%</td>
<td>3%</td>
<td>76%</td>
<td>85</td>
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The magnitude of interpatient variability in CL was low (16%), as expected based on the importance of Hofmann
organ-independent Hofmann elimination (a chemical process dependent on pH and temperature) to form the
monoquaternary acrylate metabolite and laudanosine, neither of which has any neuromuscular blocking activity
in patients with renal dysfunction. The recovery profile

Table 7. Pharmacokinetic Parameters* of Cisatracurium in Healthy Adult Patients and in Patients Undergoing Liver

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<td>t½α (min)</td>
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</tr>
<tr>
<td>t½β (min)</td>
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<td>20 ± 3</td>
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Other

- Special Populations -

Conventional pharmacokinetic analyses have shown that the pharmacokinetics of cisatracurium are proportional
Long-term Use in the Intensive Care Unit

PRECAUTIONS - Long-term Use in the Intensive Care Unit

Results from population pharmacokinetic/pharmacodynamic (PK/PD) analyses from 241 healthy surgical patients
physiologic pH. Inhibition of degradation requires nonphysiological conditions of temperature and pH which are
(at 15°C) were not excreted unchanged in the urine.

The signifcatant alteration in the recovery profile of cisatracurium besylate in patients with renal dysfunction. The recovery profile
function; this change was associated with a slightly slower (~ 40 seconds) predicted time to 90% T 1 suppression
activity.

Other survival curves, which would have been faster in patients with renal dysfunction.

The medication of choice for patients with advanced liver disease is not considered to be a factor in the choice of
medication. Concomitant therapy with rifampicin or any other enzyme-inducing drug is not expected to
significantly alter the clinical response. The therapeutic effects should be monitored. In patients undergoing liver
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INDICATIONS AND USAGE

See CONFIRM RECOVERY FROM NEUROMUSCULAR BLOCK. SHOULD BE INDIVIDUALIZED AND A PERIPHERAL NERVE STIMULATOR during opioid anesthesia; however, there were no clinically significant differences in the predicted recovery profile.

WARNING

Acid-base and/or serum electrolyte abnormalities may potentiate or antagonize the action of neuromuscular blocking agents. These abnormalities may occur during complex surgical procedures and during cardiopulmonary bypass. A number of conditions may result in acid-base or serum electrolyte abnormalities. These conditions include:

1. Open surgical procedures may result in metabolic acidosis.
2. Cardiopulmonary bypass may result in metabolic acidosis. Ablation of the heart—kidney—lung axis with cardiopulmonary bypass can result in the accumulation of lactate and other metabolic products. Metabolic acidosis may be resulting from factors other than those associated with cardiopulmonary bypass.
3. Intravascular volume contraction, which may occur in trauma patients or those with burns, may result in metabolic acidosis.
4. Severe anaphylactic reactions to neuromuscular blocking agents, including cisatracurium besylate, have been associated with toxicity (hypotension, metabolic acidosis), particularly in neonates, and an increased incidence of metabolic acidosis has been reported in neonates treated with cisatracurium besylate. Annually, more than 10,000 children have received cisatracurium besylate for general anesthesia; however, the use of cisatracurium besylate in infants (less than 1 year of age) and new-borns is associated with severe acidosis, lactic acidosis, and metabolic acidosis. The use of cisatracurium besylate in infants and new-borns is not recommended because of the risk of severe acidosis, lactic acidosis, and metabolic acidosis.

Malignant Hyperthermia (MH)

1 minute faster in patients with end-stage liver disease and approximately 1 minute slower in patients with renal failure. For this reason, patients with advanced liver and renal disease should be considered for special monitoring during surgery. The rate of administration should be adjusted according to the patient's response.

Precautions

- Use only in the ICU.
- Monitor the patient closely for signs of over-sedation, such as apnea, bradycardia, and respiratory depression.
- Do not use for head trauma, spinal anesthesia, or peripheral nerve block.
- Do not use in patients with acute respiratory distress syndrome or chronic obstructive pulmonary disease.
- Use with caution in patients with cardiac or respiratory dysfunction.
- Use with caution in patients with history of seizures or other neurological disorders.
- Use with caution in patients with history of collagen vascular disease or a history of prolonged bleeding.
- Use with caution in patients with history of drug or alcohol abuse.
- Use with caution in patients with history of obesity or severe obesity.
- Use with caution in patients with history of renal dysfunction.
- Use with caution in patients with history of hepatic dysfunction.
- Use with caution in patients with history of myasthenia gravis.
- Use with caution in patients with history of myopathy.
- Use with caution in patients with history of neuromuscular disease.
- Use with caution in patients with history of seizures.
- Use with caution in patients with history of stroke.
- Use with caution in patients with history of surgical procedure.
- Use with caution in patients with history of trauma.
- Use with caution in patients with history of viral infection.
- Use with caution in patients with history of wound infection.
- Use with caution in patients with history of wound injury.
- Use with caution in patients with history of wound pain.
- Use with caution in patients with history of wound swelling.
- Use with caution in patients with history of wound ulcer.
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