**Dexmedetomidine**

*Decadron®, DexPak®, DoubleDex®*

**MOA**
- Synthetic glucocorticoid, no mineralocorticoid activity
- Fluorinated methylprednisolone
- Pleiotropic effects

**Relative Potencies of Common Corticosteroids**

<table>
<thead>
<tr>
<th>AGENT</th>
<th>GLUCOCORTICOID ACTIVITY</th>
<th>MINERALOCORTICOID ACTIVITY</th>
<th>EQUIVALENT DOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dexamethasone</td>
<td>25</td>
<td>0</td>
<td>0.75</td>
</tr>
<tr>
<td>Hydrocortisone</td>
<td>1</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>Prednisone</td>
<td>4</td>
<td>0.8</td>
<td>5</td>
</tr>
<tr>
<td>Methylprednisolone</td>
<td>5</td>
<td>0.5</td>
<td>4</td>
</tr>
</tbody>
</table>

**Dosing**

Varies based on indication
- PONV: 4-5 mg IV
- Emetogenic chemotherapy (off-label): 4-20 mg PO/IV
- Postop analgesia doses range between 0.1-0.2 mg/kg IV. See the chart for recommendations. We recommend a standard dose of 8 mg.

**Pharmacokinetics (IV)**

- Rapid conversion of prodrug with max plasma levels in 10 minutes
- Terminal half life: 4.6 hours
- Binds to albumin; hepatically cleared
- 1-20% renal clearance of unbound drug

**Perioperative Use**

- Single perioperative dose has shown reduced pain scores and opioid use for up to 24 hours postop
- Intermediate dose 0.1-0.2 mg/kg may offer best opioid sparing benefit
- May prolong time to first analgesic request after spinal anesthesia
- IV may similarly prolong analgesic effect as perineural injection for nerve blocks

**References**

3. De Oliveira, Jr. et al., *Anesthesiology.* 2011
4. Heesen et al., *Anesthesia.* 2019
5. Hussain et al., *Can J Anesth.* 2018