Marquette General Health System
Pharmacy and Therapeutics Committee
Medication Guideline

Drug Classification: 72:00 Local Anesthetics Used in the On-Q® Pain Pump

<table>
<thead>
<tr>
<th>Agent:</th>
<th>Formulary</th>
<th>Nonformulary</th>
<th>Restricted</th>
<th>Nonstock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bupivacaine (Marcaine®)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Approved bupivacaine concentrations include 0.25% and 0.5%.

Pharmacy and Therapeutics Committee-approved Indications for Inpatient Use:
- Local anesthetic (bupivacaine)-containing pumps are intended for postoperative pain control in patients undergoing surgical (i.e., cardiothoracic, orthopedic, general surgery) procedures in which continuous administration of a local anesthetic is preferred.

Dosage & Administration:
Table: On-Q® pain pumps currently utilized at Marquette General Hospital.

<table>
<thead>
<tr>
<th>Infusion Pump</th>
<th>Drug**</th>
<th>Rate***</th>
</tr>
</thead>
<tbody>
<tr>
<td>PainBuster® (300 mL reservoir) Model: PM024-A (contains pump kit #P270X5)</td>
<td>Bupivacaine 0.5%</td>
<td>Single catheter with constant rate of 5 ml/hr</td>
</tr>
<tr>
<td>PainBuster® (400 mL reservoir) Model: PM028-A (contains pump kit #P400X4D)</td>
<td>Bupivacaine 0.5%</td>
<td>Dual catheters each with constant rate of 2 ml/hr</td>
</tr>
</tbody>
</table>

* SilverSoaker® catheters should not be used in patients with hypersensitivity reactions to silver.
** Bupivacaine 0.5% is the preferred concentration unless more than one pump is utilized in which 0.25% is the preferred concentration.
*** Reservoir bags must be removed or changed out at the end of infusion and must not be refilled or reused.

Monitoring / Outcomes:
Therapeutic: Patients should be monitored for the onset and regression of anesthesia as well as for response to pain.

Adverse Events:
- Due to risk of ischemic injury, vasoconstrictors such as epinephrine are not recommended for continuous infusions for the following routes of administration: intraoperative site, perineural and percutaneous.
- Avoid placing the catheter in joint spaces. Although there is no definitive established causal relationship, some literature has shown a possible association between continuous intra-articular infusions and the subsequent development of chondrolysis.

Acute Local Anesthetic Toxicity:
- Monitor blood pressure for detection of hypotension and for signs of cardiotoxicity (i.e., bradycardia, cardiac arrest, heart block which can progress to ventricular arrhythmia) central nervous system toxicity (i.e., excitation, restlessness, paresthesias, dizziness, tremors, disorientation, seizure).
- Administer an IV bolus dose of fat emulsion 20% (Intralipid®) 1.2 to 2 ml/kg followed by a continuous infusion of 0.25 to 0.5 ml/kg/min for 30-60 minutes. Bolus could be repeated 1-2 times for persistent asystole.

Special Handling Procedures:
- Local anesthetics are not considered hazardous drugs.
- Local anesthetics are not considered high-alert drugs.

References: