IV Lidocaine for Pain

- **Scope/Restrictions:** Emergency Department
  - Recommended use is adult patients 18 to 65 years of age.

- **Recommended dosing:** Lidocaine at 1.5 mg/kg (max dose of 200 mg) in 100 mL 0.9% sodium chloride IVPB over 15 minutes.
  - No repeat doses
  - No renal dose adjustment needed; avoid with history of liver dysfunction

- **12-lead EKG** prior to administration

- **Lipid emulsion must be readily available in case of toxicity**
  - IV lipid emulsion is contraindicated in patients with severe soy or egg allergy. This allergy is not a contraindication for use of IV lidocaine.
  - Initial bolus: 1.5 mL/kg (lean body mass) of 20% lipid emulsion given over 2 – 3 minutes. If minimal to no-response, may repeat twice at 5-minute intervals.
  - Infusion: After initial bolus, may consider infusion at a rate of 0.25 – 0.5 mL/kg/min for 30 – 60 minutes. Maximum dose is 10 – 12 mL/kg over first 30 – 60 minutes. Optimal duration is unknown but infusion for up to 48 hours may be required
  - Contact poison center for additional recommendations

- **Potential indications, but not limited to:**
  - Renal colic
  - Abdominal pain (nontraumatic and traumatic)

- **Relative contraindications:**
  - Pregnancy, breastfeeding
  - History of seizures
  - History of heart disease (particularly arrhythmia, heart block, or heart failure)
  - Hepatic or renal insufficiency

- **RN Administration and Monitoring:**
  - Vital signs (blood pressure, heart rate, respiratory rate and oxygen saturation) and pain assessment prior to administration.
  - Continuous cardiac monitoring during administration; notify provider of any changes.
  - Monitor vital signs every 15 minutes until infusion is completed.
  - Assess for signs of toxicity; notify provider if present.
    - Mild to moderate toxicity symptoms may include: lightheadedness, dizziness, numbness around the tongue and mouth, ringing in the ears, metallic taste, hallucinations, drowsiness/lethargy, paresthesia
    - Severe symptoms of toxicity include shallow breathing, muscle twitching, seizures, coma, hypotension, arrhythmia and cardiac arrest.
  - Continue cardiac monitoring for 30 minutes after completion of infusion; obtain vital signs and pain score 30 and 60 minutes after completion of infusion.

Additional Resources:

Wisconsin American College of Emergency Physicians. (2018) **WACEP Alternatives To Opioids Program.**

References:

5. LaPietra A. **ALIEM. Intravenous lidocaine for renal colic.**

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