Intravenous Lidocaine for Pain Management in the Emergency Department, AW

SCOPE

Ascension Wisconsin Emergency Departments

PURPOSE/RATIONALE

To provide standardization for administration of intravenous (IV) lidocaine to adult patients for pain management in the Emergency Department.

Lidocaine is a local anesthetic with analgesic, antihyperalgesic, and anti-inflammatory properties. Administration of low dose IV lidocaine infusion, either alone or as part of a multimodal pain management approach, improves analgesia and reduces opioid use.

DEFINITIONS

NA

POLICY

1. IV lidocaine for pain management may be ordered by an Emergency Department provider.
2. A Registered Nurse (RN) or licensed paramedic, under the direction of an Emergency Department provider, can administer IV lidocaine for pain management.
3. Recommended use is adult patients 18 to 65 years of age.
4. Populations that may benefit from IV Lidocaine include, but not limited to:
   a. Renal colic
   b. Abdominal pain (nontraumatic and traumatic)
5. Absolute contraindication – allergy to lidocaine
6. Relative contraindications:
   a. Pregnancy, breastfeeding
   b. History of seizures
   c. History of heart disease (particularly arrhythmia, heart block, or heart failure)
d. Hepatic or renal insufficiency

7. Recommended dosing: Lidocaine 1.5 mg/kg (max dose of 200 mg) in 100 mL 0.9% sodium chloride IVPB over 15 minutes.

8. No repeat doses

9. Lipid emulsion must be available in case of toxicity
   a. Intravenous lipid emulsion is contraindicated in patients with severe soy or egg allergy
   b. 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.
   c. 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
   d. Contact poison center for additional recommendations

**PROCEDURE**

1. 12-lead EKG prior to administration.

2. RN monitors and documents the following:
   a. Vital signs (blood pressure, heart rate, respiratory rate and oxygen saturation) and pain assessment prior to administration.
   b. Continuous cardiac monitoring during administration; notify provider of any changes.
   c. Monitor vital signs every 15 minutes until infusion is completed.
   d. Assess for signs of toxicity and notify provider with new onset of symptoms. Adverse effects may include:
      i. Hypotension, bradycardia, nausea/vomiting, dizziness, numbness, edema, and metallic taste.
     ii. Signs of toxicity include lethargy, shallow breathing, seizures, hypotension, arrhythmia and cardiac arrest.
   e. Continue cardiac monitoring for 30 minutes after completion of infusion; obtain vital signs and pain score 30 and 60 minutes after completion of infusion.

**ATTACHMENT NAMES**

N/A

**REFERENCES**


Attachments: No Attachments

Approval Signatures

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Applicability

Affinity Health System, Affinity Medical Group, Ascension All Saints Hospital, Ascension Calumet Hospital, Ascension Eagle River Hospital, Ascension Good Samaritan Hospital, Ascension NE Wisconsin-Mercy Campus, Ascension NE Wisconsin–St. Elizabeth Campus, Ascension Our Lady of Victory Hospital, Ascension SE Wisconsin Hospital-Franklin Campus, Ascension SE Wisconsin Hospital–Elmbrk/St Josph Cmpus, Ascension Sacred Heart-St. Mary's Hospitals, Ascension St. Clare's Hospital, Ascension St. Francis Hospital, Ascension St. Michael's Hospital, Ascension Wisconsin, Columbia St. Mary's Hospital Milwaukee, Columbia St. Mary's Hospital Ozaukee, Howard Young Medical Center, Midwest Orthopedic Specialty Hospital, Ministry Health Care, Ministry Medical Group, Ministry Spirit Medical Transportation, Sacred Heart Rehabilitation Institute, Saint Elizabeth's Medical Center, Wheaton Franciscan Healthcare-Southeast Wisconsin, Wheaton Franciscan Medical Group