

Subject: ALS Medication – Paramedic
Lidocaine Administration Policy

- I. Class
 - A. Ventricular antidysrhythmic.
 - B. It also has roles as an adjuvant analgesic in managing acute and chronic pain.
- II. Indications
 - A. Stable monomorphic or polymorphic Ventricular Tachycardia.
 - B. Unstable monomorphic or polymorphic when cardioversion/defibrillation is delayed.
 - C. Recurrent Ventricular Fibrillation or pulseless Ventricular Tachycardia refractory to Amiodarone.
 - D. For pain management following Intraosseous (IO) placement in the conscious or semi-conscious patient.
- III. Therapeutic Effects
 - A. Suppresses ventricular ectopic activity by decreasing the excitability of the heart muscle and its conduction system.
 - B. As a local anesthetic it prevents pain by blocking the signals at the nerve endings in the skin.
- IV. Contraindications
 - A. Absolute:
 - 1. Bradycardia.
 - 2. Asystole.
 - 3. Idioventricular rhythms/Pulseless Electrical Activity (PEA).
 - 4. Hypersensitivity.
 - 5. 2nd or 3rd degree heart block.
 - B. Relative:
 - 1. Renal dysfunction.
 - 2. CHF.
 - 3. Patients over 70 years old. (Consider lower doses and/or very slow IV for these patients.)
- V. Administration and Dosage - **Ventricular Tachycardia with a Pulse**
 - A. Adult
 - 1. 0.5mg-1.0mg/kg IVP/IO, repeat if needed 0.5-0.75mg/kg boluses every 5-10 minutes to a total of 3mg/kg.
 - 2. If Lidocaine is successful in terminating Ventricular Tachycardia, bolus dosing of lidocaine can be repeated at 0.5 to 0.75 mg/kg every 5 to 10 minutes, up to an additional maximum cumulative dose of 3 mg/kg OR
 - 3. A maintenance infusion of lidocaine at a rate of 1 to 4 mg/minute, though it can be started as low as 0.5 mg/minute.
 - B. Pediatric (less than 14 years)
 - 1. 1 mg/kg IV/IO, repeat if needed 0.5mg/kg.

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VI. Administration and Dosage - **Ventricular Fibrillation or Pulseless Ventricular Tachycardia refractory to Amiodarone**

A. Adult

1. 1.0-1.5 mg/kg IV/IO.
2. Repeat every 3-5 minutes as needed.
3. Total maximum cumulative dose of 3 mg/kg.

B. Pediatric (less than 14 years)

1. 1 mg/kg IV/IO, repeat if needed 0.5mg/kg.

VII. Administration and Dosage - **Following Placement of IO in the Conscious Patient**

A. Adult

1. 10mg lidocaine 2% slowly through the IO site.
2. Wait approximately 30-60 seconds before flushing with normal saline.
3. Repeat to maximum 40mg to achieve desired effect.

B. Pediatric (less than 14 years)

1. 0.5mg/kg slowly through the IO. Not to exceed 20mg.

VIII. Special Information

- A. Adverse Effects can include slurred speech, altered level of consciousness, and muscle twitching.
- B. Toxic levels can cause seizures.

IX. Base Orders

Standing Order if no contraindications exist.