

Subject: Scope of Practice/Procedure - ALS
Lidocaine (Xylocaine)

Associated Policies: 5402, 5421, 5431, 5439, 6504, 6506, 6534, 6550

- I. Class
 - A. Ventricular antidysrhythmic.

- 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.

- 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.)

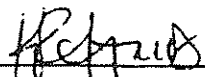
- V. Adverse Effects
 - A. Slurred speech.
 - B. Altered level of consciousness.
 - C. Toxic levels can cause seizures.
 - D. Muscle twitching.

- VI. Administration and Dosage
 - A. Adult:
 - 1. Ventricular Tachycardia with a pulse: 0.5-1.0mg/kg IVP/IO, repeat if needed 0.5-0.75mg/kg boluses every 5-10 minutes to a total of 3mg/kg. If lidocaine is

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- successful, initiate IV infusion at 1mg/minute may increase to 4mg/minute.
2. Ventricular fibrillation or Pulseless ventricular tachycardia refractory to Amiodarone: 1.0-1.5 mg/kg IV/IO. Repeat every 3-5 minutes as needed. Total maximum dose 3 mg/kg.
- B. Pediatric:
1. 1 mg/kg IV/IO
 2. Infusion rate: Dose of 20-50 mcg/kg/min.
 - a. To mix: add 300 mg (15 ml of 2% Lidocaine 20 ml/cc) to 250 ml NS or D₅W. (1 micro drop/kg/minute of this solution = 20 mcg/kg/minute), or
 - b. Use the Pediatric Resuscitation tape, refer to each weight for specific doses, ml's to remove and add to make desired solution, and delivery rate. Each weight will provide a different concentration of the delivery solution and rate of delivery.
- C. Following IO placement in the conscious patient.
1. Adult - 10mg lidocaine 2% slowly through the IO site. Wait approximately 30-60 seconds before flushing with normal saline. Repeat to maximum 40mg to achieve desired effect.
 2. Pediatric - 0.5mg/kg slowly through the IO. Not to exceed 20mg.

Approved: 

Approved as to Form: 