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CATEGORY: ACP Medications

TITLE: **Lidocaine HCL**

Other Names:
- Xylocaine, Xylocard

Classifications:
- Anti-arrhythmic, Sodium Channel Blocker, local anesthetic

Pharmacodynamics:
- Suppression of Premature Ventricular Contractions and re-entry arrhythmias by blocking Sodium (Na) channels and shortening action potential.
- Ventricular excitability is depressed and the stimulation threshold of the ventricle is increased during diastole.
- Local or regional anesthetic by inhibiting the ionic fluxes required for the initiation and conduction of impulses.

Onset:
- IV/IO: 45 – 90 seconds.
- ETT: 1 - 2 min.
- Aerosol: < 2 min.

Peak:
- IV/IO: 2 - 7 min.
- ETT: < 5 min.
- Aerosol: < 5 min.

Duration:
- IV/IO: 10 - 20 min.
- ETT: 10 - 20 min.
- Aerosol: 10 - 20 min.

Indications:
- Refractory ventricular fibrillation and pulseless ventricular tachycardia
- Stable patients with wide complex tachycardias

Contraindications:
- Hypersensitivity to the medication
- Idioventricular rhythms
- Severe degrees of sinoatrial, atrioventricular or intraventricular blocks
- Addams-Stokes Syndrome

Precautions:
- Administration of IV Lidocaine is sometimes accompanied by a hypotensive response.
- Lidocaine should be used with caution in patients with epilepsy, impaired cardiac conduction, severe shock, bradycardia, CHF, AMI, hypoperfusion states, digitalis intoxication, hypokalemia, hepatic & renal insufficiency and with the elderly.

Adverse Reactions:
- Slurred speech, drowsiness, parasthesia to the lips, tinnitus
- Seizures secondary to lidocaine toxicity
- Respiratory depression
- Hypotension
- Nausea and vomiting
- Anaphylactic reactions
- Local thrombophlebitis
- Dizziness, euphoria
- Bradycardia

Drug Interactions:
- Incompatible with alkaline solutions (i.e. Sodium bicarbonate)
- Compatible with all commercially available IV fluids

Special Considerations:
- Debilitated, elderly and or acutely ill patients should be given reduced doses commensurate with their age and physical condition.

Preparations:
- 100 mg/5 ml preload (20 mg/ml) 2%
- Spray: 10 mg per spray

References:
- Ontario Provincial ALS Patient Care Standards (ACP), Version 4.5
- Compendium of Pharmaceutical and Specialties 2013
- 2015 AHA Guidelines : ACLS

NOTE: ***The information contained herein does not supersede or negate the MoHLTC Provincial Medical Directives and should only serve as general information about the medication itself. For medication dosages, please refer to the current version of the Ontario Provincial ALS Patient Care Standards.***