

CO's CURE

Lidocaine Tip Sheet

Lidocaine administration on the floor:

- Non-cardiac dosing: can be used on the floor if nurses are trained
- Must have telemetry monitoring while on drip
- 1 mg/kg/hr – non-titratable (max dose = 120 mg/hr, regardless of weight)
- If BMI>30, use ideal body weight
- Is being used as part of CO's CURE Hospital Medicine Pilot
- Typical infusion time is 24 hours; order will default to stop at 24 hours
- Vital signs (BP/HR) should be obtained prior to the start of the infusion, then every five minutes x3, then every 15 minutes x1, then every 30 minutes x1, then every four hours
- Nurse should monitor for signs or symptoms of lidocaine toxicity prior to start of infusion and then every four hours

Evidence:

- Lidocaine reduces pain and is opioid-sparing. Evidence supports use for neuropathic pain, critical limb ischemia and renal colic. See references below.

Relative contra-indications include:

- Unstable coronary disease, recent MI, heart failure, arrhythmia (especially heart block, WPW)
- Severe electrolyte disturbances
- Cirrhosis, liver impairment
- Seizure disorder
- Renal impairment

Signs or symptoms of lidocaine toxicity may include:

Early:

- Tongue and perioral numbness
- Metallic taste
- Lightheadedness
- Tinnitus
- Hallucinations
- Muscle fasciculations and tremors

Late:

- Decreased level of consciousness (confusion, sedation)
- Tonic-clonic seizures
- HR <50 or >120, decrease in BP greater than 30 mmHg
- Apnea
- Ventricular dysrhythmias
- Cardiac arrest

If any signs or symptoms of lidocaine toxicity:

- **STOP** the infusion.
- Get help.
 - Notify the charge nurse and provider.
 - If serious signs and symptoms occur, a rapid response or code may need to be called.
- Consider lipid emulsion therapy at the first sign of a serious event.
 - Lipid emulsion therapy will be pre-checked in the order set and available from pharmacy.

Chappapalli V, Tremont-Lukats IW, et al. Systemic administration of local anesthetic agents to relieve neuropathic pain. *Cochrane Database of Systemic Reviews*. 2013
Daykin H. The efficacy and safety of intravenous lidocaine for analgesia in the older adult: a literature review. *British Journal of Pain*. 2017.
Soleimanpour H, et al. Effectiveness of intravenous lidocaine versus intravenous morphine for patients with renal colic in the emergency department. *BMC Urology*. 2012.
Vahidi E, Shakoor D, et al. Comparison of intravenous lidocaine versus morphine in alleviating pain in patients with critical limb ischemia. *Emerg Med J*. 2015.