

PROTOCOL FOR: Lidocaine: IV Administration

POLICY: This drug is to be administered only in critical care areas where patient is on cardiac monitor.

DESIRED PATIENT

- OUTCOME:
1. Patient will achieve therapeutic blood levels to control ventricular arrhythmias.
 2. Patient will be monitored for possible side effects of Lidocaine.

CLINICAL
ASSESSMENT

AND CARE:

1. Prior to Starting Infusion:
 - a. Validate M.D. order for bolus, solution concentration and infusion rate:
 - 1) Suggested concentration: 2 Gms/500 D₅W or .9 N/S
 - 2) Double: 4 Gms/500 D₅W or .9 N/S
 - b. Check patient's chart for possible past history of allergy to Lidocaine.
 - c. Perform baseline assessment:
 - 1) LOC/anxiety
 - 2) V/S (BP, HR, resp.)
 - d. Refer to dosage in mg/min.
2. Beginning the Infusion:
 - a. Administer bolus ordered (based on patient's weight, usually 1 - 1.5 mg/kg, not to exceed 3 mg/kg).
 - b. Begin infusion at ordered rate/dose (usual dose range 1-4 mg/min).
 - c. Stay at bedside with patient for initial 5-15 minutes of infusion, assessing VS's and rhythm and documenting in unit flow sheet.
3. During the Infusion:
 - a. Monitor ECG strip for presence, increase or decrease in ventricular arrhythmias.
 - b. Assess patient every 2-4 hours for possible toxic side effects, i.e., CNS changes, drowsiness, dizziness,

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recurred or increased ectopy, confusion, psychosis, dyspnea, slurred speech. Skin rash is rare.

- c. Measure intervals on ECG strip every 12 hours prn and document in unit flow sheet.
- d. Monitor labs for therapeutic levels - usual 1-5 mg/ml. Possible effects from toxic levels: hypotension, arrhythmias, heart block. If patient is on other antiarrhythmic agents, the effects may be additive.
- e. If no decrease in ventricular ectopy is seen within 30 minutes after the bolus and the infusion have been initiated, consult with M.D. to rebolus and/or increase the infusion rate.
- f. If patient is still not responding, inform M.D. and discuss concomitant use of another antiarrhythmic medication and/or alternate therapy.

4. Discontinuation of Infusion:

- a. Due to the long half-life of lidocaine, the infusion can be completely turned off when there is an order to do so, does not need to be tapered off.
- b. After discontinuing the infusion, heighten your assessment of patient's ECG rhythm for recurrent ventricular ectopy.

APPROVALS: ICU Standards Committee
ED Standards Committee
Nursing Standards Committee
Cardiac Step-Down Standards Committee

EFFECTIVE DATE: 4/90

REVISION DATES: 1/93, 1/95, 10/95, 3/96, 10/99, 9/00, 2/06, 9/08