Lidocaine

MEDICATION

THE DRUG

Class: Antiarrhythmic / local anesthetic (Xylocaine)

How it works: Suppresses ventricular ectopic activity, raises the ventricular fibrillation threshold, and slows impulse velocity through the conduction system

USE IT FOR

- Ventricular fibrillation / ventricular tachycardia
- Laryngotracheal anesthesia
- Premedication before intubation in patients with head injuries
- Local pain control, e.g. IO injection 2% (adult 50 mg slow push; peds 0.5 mg/kg slow push) — guideline p.173

DON'T GIVE / CAUTION

- High-degree heart blocks (2nd degree type 2, 3rd degree, bifascicular block)
- PVCs in conjunction with bradycardia
- Reduce the dose by 50% in patients over 70 or with liver disease

DOSE

Adult: VF/VT: 1–1.5 mg/kg IV/IO

Peds: VF/VT: 1 mg/kg IV/IO

Repeat: Repeat 0.5–1 mg/kg every 3–5 min; maximum 3 doses or 3 mg/kg total

WATCH FOR

- CNS toxicity: drowsiness, anxiety, dizziness, confusion, convulsions
- Nausea / vomiting
- Widening of the QRS

PEARLS

- Maximum dose 3 mg/kg — the ceiling applies across uses (topical LTA dose included, guideline p.176)
- First-line arrest alternatives: amiodarone or lidocaine for VF/VT (guideline p.42)

Take Home Message:

Lidocaine is Mercy's alternate VF/VT antiarrhythmic: 1–1.5 mg/kg IV/IO, repeat at half-step doses, and never past 3 mg/kg total.