Lidocaine

Pharmacological Category: Antiarrhythmic, anesthetic

Routes: IV/IO

Indications:
1. Cardiac arrest from VF/VT
2. Wide complex tachycardia
3. As an anesthetic agent for IO establishment

Contraindications:
1. Bradycardia or heart block

Expected effects:
1. Increased VF threshold
2. Decreased ventricular irritability
3. Decreased pain with infusion

Dosing: ADULT CARDIAC ARREST
Indication: Cardiac arrest V-Fib, pulseless V-Tach, or multiple AED defibrillations
Adults administer:
1. Lidocaine 1 mg/kg IV/IO. May repeat 0.5 mg/kg every 5-10 minutes. Total dose of 3 mg/kg

Dosing: ADULT TACHYCARDIA
Indication: Regular Wide QRS rhythm (i.e., V-Tach, SVT/A-Flutter with aberrancy)
Adults administer:
1. Lidocaine 1 mg/kg IV. Repeat lidocaine 0.5 -1.0 mg/kg IV push every 5 - 10 minutes to a maximum of 3 mg/kg.

Dosing: PEDIATRIC CARDIAC ARREST
Indication: Cardiac arrest V-Fib, pulseless V-Tach, or multiple AED defibrillations
Pediatrics administer:
1. Lidocaine according to MI MEDIC cards
2. If MI MEDIC cards are not available administer Lidocaine 1 mg/kg IV/IO. May repeat 0.5 mg/kg twice at 5-10 minute intervals. Maximum 3 doses total

Dosing: PEDIATRIC TACHYCARDIA
Indication: For recurrent or refractory wide complex – unstable tachycardia
Pediatrics administer:
1. Lidocaine according to MI MEDIC cards
2. If MI MEDIC cards are not available administer Lidocaine 1 mg/kg IV/IO. May repeat 0.5 mg/kg twice at 5-10 minute intervals. Maximum 3 doses total

Dosing: VASCULAR ACCESS & IV FLUID THERAPY
Indication: Conscious patients experiencing pain with IO infusion
Adults administer:

1. Lidocaine 2%, 20 mg IO

Pediatrics administer:

1. Lidocaine 0.5 mg/kg, IO maximum dose of 20 mg

Used in the Following Protocols

General Cardiac Arrest (Section 5 Adult Cardiac)
Tachycardia (Section 5 Adult Cardiac)
Pediatric Cardiac Arrest – General (Section 6 Pediatric Cardiac)
Pediatric Tachycardia (Section 6 Pediatric Cardiac)
Vascular access & IV Fluid Therapy (Section 7 Procedures)

Magnesium Sulfate

Pharmacological Category: Antiseizure Agent, Electrolyte Supplement

Indications:
1. Cardiac: Torsades de Pointes
2. VF/VT in hypomagnesemia
3. Pre-eclampsia
4. Eclamptic seizures
5. Refractory status asthmaticus

Precautions:
1. Magnesium Sulfate is diluted for applications in these protocols

Expected effects:
1. Seizure cessation
2. Decreased respiratory distress

Side effects:
1. Respiratory depression
2. Hypotension
3. Asystole
4. Burning in IV site for conscious patients

Best Practice for Administering Magnesium Sulfate
1. Magnesium Sulfate dose added to 100 to 250 mL of NS and infusing over approximately 10 minutes.

Notes:
1. Magnesium Sulfate for Preeclampsia/Eclampsia can be administered prior, during, or up to 6 weeks post childbirth.
2. The dosing for preeclampsia and eclampsia are both 4 gm (see treatment protocol for pre/post radio requirements).

Dosing: ADULT RESPIRATORY DISTRESS
Indication: Status asthmaticus
Adults administer:
1. Magnesium Sulfate 2 gm slow IV (preferably added to 100-200 mL NS bag over 10 minutes).

Dosing: ADULT SEIZURES
Indication: Eclamptic seizure
Adults administer:

1. Magnesium Sulfate 4 gm over 10 minutes IV/IO until seizure stops (preferably added to 100-200 mL NS bag over 10 minutes).

Dosing: CHILDBIRTH & RELATED OBSTETRICAL EMERGENCIES
Indication: Preeclampsia or Eclamptic Seizure
Adults administer:

1. Magnesium Sulfate 4 gm over 10 minutes IV/IO until seizure stops (preferably added to 100-200 mL NS bag over 10 minutes).

Dosing: ADULT CARDIAC ARREST
Indications: Suspected torsades de pointes
Adults administer:

1. Magnesium Sulfate 2 gm IV/IO

Used in the Following Protocols:
Respiratory Distress (Section 3 Adult Treatment)
Seizures (Section 3 Adult Treatment)
Childbirth and Obstetrical Emergencies (Section 4 Obstetrics and Pediatrics)
General Cardiac Arrest (Section 5 Adult Cardiac)

Methylprednisolone

Pharmacological Category: Corticosteroid, Systemic

Routes: IV/IO/IM

Indications:
1. Allergic reactions
2. Airway inflammation
3. Reactive airway disease
4. Acute adrenal insufficiency

Contraindications:
1. Hypersensitivity to methylprednisolone (or similar)

Expected effects:
1. Decreased inflammation

Side effects:
1. Dizziness
2. Nausea/vomiting

Notes:
1. Prednisone PO is preferred over methylprednisolone for respiratory distress however prednisone it is not a required medication, and the PO tablet has restrictions (tablet cannot be cut, cannot be administered to children ≤ 6 years of age, cannot be administered to patient that is unable to safely take PO medication).

Dosing: ANAPHYLAXIS ALLERGIC REACTION
Indication: If patient is symptomatic of an allergic reaction but not in a severe allergic reaction or anaphylaxis OR after epinephrine administration
Adults administer:
1. Methylprednisolone 125 mg IV/IO/IM

Pediatrics administer:
1. Methylprednisolone according to MI MEDIC cards.
2. If MI MEDIC cards are not available administer Methylprednisolone 2 mg/kg IV/IO/IM. Maximum dose 125 mg.

Dosing: ADRENAL CRISIS
Indication: Patients with a known history of adrenal insufficiency, experiencing signs of crisis.
Adults administer:

1. Methylprednisolone 125 mg IV/IO/IM

Pediatrics administer:
1. Methylprednisolone according to MI MEDIC cards.

2. If MI MEDIC cards are not available administer Methylprednisolone 2 mg/kg IV/IO/IM. Maximum dose 125 mg

Dosing: ADULT RESPIRAOTRY DISTRESS
Indication: Respiratory distress patients with wheezing or diminished breath sounds due to asthma or COPD.
Adults administer:
1. Methylprednisolone 125 mg IV/IO/IM

Dosing: PEDIATRIC RESPIRATORY DISTRESS, FAILURE OR ARREST
Indication: Pediatric respiratory distress patients with suspected bronchospasm (wheezing)
Pediatrics administer:
1. Methylprednisolone according to MI MEDIC cards.
2. If MI MEDIC cards are not available administer Methylprednisolone 2 mg/kg IV/IO/IM. Maximum dose 125 mg

Used in the Following Protocols:
Anaphylaxis/Allergic Reaction (Section 1 General Treatment)
Adrenal Crisis (Section 1 General Treatment)
Respiratory Distress (Section 3 Adult Treatment)
Pediatric Respiratory Distress, Failure or Arrest (Section 4 Obstetrics and Pediatrics)