

SECTION: PM-10

PROTOCOL TITLE: PEDIATRIC TOXICOLOGICAL
EMERGENCIES

REVISED: September 28, 2010

GENERAL COMMENTS: This protocol directly supplements protocols R-1 through R-8 (Adult Toxicological Emergencies.)

BLS SPECIFIC CARE: See General Pediatric Care Protocol PM-1

ILS SPECIFIC CARE: See General Pediatric Care Protocol PM-1

ALS SPECIFIC CARE: See General Pediatric Care Protocol PM-1

Seizures secondary to toxic ingestion:

- Follow Pediatric seizure Protocol (PM-4)

Hypotension secondary to toxic ingestion:

- Follow Pediatric Hypotension and shock protocol (PM-5)

Suspected (symptomatic) opiate ingestion:

- Narcan
 - IV/ETT/IO: 0.01-0.05 mg/kg to max single dose of 2 mg. Repeat PRN

Suspected TCA overdose: (do not administer Procainamide)

- Sodium Bicarbonate for s/s of TCA toxicity
 - IV: 1 meq/kg IV
 - Rebolus in 5-10 min at 0.5 meq/kg if s/s persist
 - OPTIONAL INFUSION: 50-meq/1000 cc, run at 150 cc/hr, titrated for effect.
- Lidocaine (Xylocaine) for ectopy or Ventricular Tachycardia REFRACTORY to Sodium Bicarbonate.
 - IV or IO: 1 mg/kg
 - Max 3mg/kg
- Magnesium Sulfate (for Torsades REFRACTORY to sodium Bicarbonate)
 - IV or IO: 25-50 mg/kg in 100 cc infused over 2-5 min
 - Max 2 g

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Calcium channel blocker/beta blocker ingestion

- **Calcium Chloride (for Calcium Channel Blockers Only)**
 - IV (Slow): 2-4 mg/kg every 10 minutes until S/S improve
- **Glucagon**
 - IV, IM, SQ: 0.1 mg/kg to a max of 1 mg every 5 minutes as needed and as available.
 - Do not use diluents (e.g. propylene glycol) supplied with single use kits. Use Normal Saline instead.
- **Epinephrine Infusion**
 - 0.1-2 mcg/kg/min

Organophosphate Exposure

- Atropine Sulfate
 - IV/IO/IM: 0.05 mg/kg, repeated PRN for continued symptoms

Hyperdynamic drug ingestion/exposure (with active S/S)

- Diazepam (Valium)
 - IV/IM: 0.2-0.3 mg/kg every 5-10 min PRN to a max of 10 mg
- Midazolam (Versed)
 - IV/IM: 0.1 mg/kg every 5-10 min (over 2-5 minutes if IV). Maximum dose of 2.5 mg
- NTG Spray: For hypertension and suspected coronary vasospasm/A.C.S.
 - SL: 0.4 mg SL spray/tab every 3-5 minutes PRN.
 - Hold for B/P <90, ingestion of Viagra use (or similar drug) within previous 24 hours. Use with caution in suspected right-sided MI

EPS:

- Benadryl (Diphenhydramine)
 - IV/IM: 1-2 mg/kg IVP max of 25 mg

PHYSICIAN PEARLS:

The following are high risk toxicological situations that should be evaluated at a hospital regardless of clinical stability. *These are the substances that, for a variety of reasons, result in the highest ICU admissions.*

- Any situation where 2 or more agents/drugs may be involved (Poly-Pharmacy ingestion). 44% of fatal pediatric overdoses involve more than one substance
- Iron Ingestions (as little as 20-60mg/kg) Iron ingestions may present with a latent period at about 1-6 hours with cardiovascular collapse occurring 12-24 hours post ingestion. Commonly found in OTC supplements, *iron ingestions are the leading cause of pediatric fatal ingestion*
- Hyperdynamic Drug Ingestions/Meth Lab exposures
- Antidepressants: Tricyclic Antidepressants (TCAs) are especially high risk
- Anticonvulsants
 - Benzodiazepines
 - Depakote
- Digitalis (Nightshade) or Digitalis containing substances. (Digoxin)
- Opiates
- Hydrocarbon-based household products:
 - Gasoline, kerosene, etc
 - Gases & fumes (huffing)
- Alcohols: Alcoholic Beverages, Wood Alcohol, Etc.
- Cleaning substances

In addition to the above substances, the following situations and symptoms are also worrisome with suspected toxic ingestion, and should be transported to the hospital.

- Sudden onset of:
 - Abdominal pain
 - Nausea
 - Vomiting
- Sudden onset of CNS signs:
 - Seizures
 - Coma
 - Decreased LOC
 - Bizarre behavior
 - Abnormal walking gait
- Sudden onset of unexplained illness
- Bizarre, incomplete, evasive history
 - Suspect abuse, neglect, or illegal activity.
- Pediatric patient with cardio-respiratory distress

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