

WEST MICHIGAN REGIONAL PROTOCOL

POISONING PROTOCOL

Number: II.B.5.
Date: 2-1-2007
Page: 1 of 3

Purpose: To provide a process for the assessment and management of the patient that may have ingested or received an exposure to a toxic substance, including bites and stings.

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I. Assessment Information

A. General Scene Safety:

1. In case of major toxic spill/contamination:
 - a. Park **UPWIND**.
 - b. Stop and secure safe perimeter of incident scene.
 - c. Do not enter scene unless proper protection available.
 - d. Begin identification procedures (as noted below).
2. Take whatever precautions necessary to prevent exposure to self or others.
 - a. Remove patient from exposure site to reduce continued exposure if possible.
3. Assure that the appropriate Public Safety Agency and Hazardous Response Team has been dispatched. Communicate information directly if possible (See Violent/Hazardous Scene Policy).

B. Specific Information Needed:

1. Identification of the substance (patient has been exposed to).
 - a. Sample of drug or substance and any medication or poison containers should be brought in with patient if it does NOT pose a risk to rescuers.
 - b. Identification of Hazardous Material may be obtained by:
 - 1) Awareness of materials at location
 - 2) Material Safety Data Sheets (MSDS)
 - 3) Identification numbers and labels.
 - 4) Placard numbers, colors, and symbols.
 - 5) Shipping papers.
 - c. Type of animal; retain if possible
2. The time, duration and route of exposure
3. The amount of substance patient was exposed to.
4. The amount of dilution (decontamination) of the substance which may have occurred
5. Age, weight, previous medical status of patient
6. Possible alcohol ingestion

C. Specific Objective Findings:

1. Respiratory status: rate, effort, wheezing, stridor, rales, retractions.
2. Other vital signs: pulse and blood pressure
3. Skin: burns, hives, swelling, flushed color, and other lesions.
4. Level of consciousness

II. Management of Toxic Exposure (including ingestion)

A. Utilize universal precautions.

B. Use of proper protective equipment and preparation for decontamination if necessary.

C. Establish and maintain the airway, provide oxygenation and support ventilation as needed.

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1. Consider early intubation if signs of airway compromise or altered level of consciousness.

D. Remove clothing exposed to chemical.

E. Dilute toxic substances:

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1. Noxious gas inhaled (including carbon monoxide & smoke):
 - a. Ensure high concentration of oxygen is provided.
 - b. If suspected/confirmed cyanide gas exposure, refer to CYANIDE Exposure Treatment Protocol (II.F.2.a)

WEST MICHIGAN REGIONAL PROTOCOL

POISONING PROTOCOL

Number: II.B.5.
Date: 2-1-2007
Page: 2 of 3

M B S P

- 2. Eye contamination:
a. Eye irrigation
1) Remove contact lenses
2) Flush with 1000cc of NS each eye
3) Flush from nose-side outward
4) If available, use Tetracaine hydrochloride 1-2 drops in each eye.
a. Ensure that patient does not rub eyes after administration of Tetracaine as injury may result.
b. For alkali exposure, maintain continuous irrigation.
3. Skin absorption:
a. Irrigate continuously with Normal Saline, or tap water for 15 minutes or as directed by Medical Control.
4. Ingestion:
a. As directed by Medical Control as dilution is specific to exposure.
F. If altered mental status, refer to Altered Mental Status Protocol.
G. If cardiac dysrhythmia, refer to appropriate dysrhythmia protocol.
H. If respiratory distress, refer to Respiratory Distress Protocol.
I. If the patient is seizing, refer to Seizure Protocol.
J. Transport to a hospital. If the patient needs decontamination, transport to a hospital with decontamination capabilities.
K. Obtain vascular access.
L. Monitor EKG

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CONTACT MEDICAL CONTROL

M B S P

- M. Possible orders post radio contact per specific exposure:
1. Carbon Monoxide Inhalation:
a. Transfer of patient with symptoms of significant exposure to a facility with a Hyperbaric Oxygen Chamber, if available.
b. In situation with accompanying serious burns, patient should be transported to a Burn Unit if available, or as designated by area Destination Policy.
2. For possible Cyanide Exposure:
a. Refer to Cyanide Exposure/Treatment protocol (II.F.2.a)
3. Drug, Chemical, Plant, Mushroom Ingestion:
a. Use protective eye equipment.
b. In situations of potential ingestion or inhalation of petroleum distillates, do NOT induce vomiting. Monitor the patient's respiratory and mental status very closely.
1) Be prepared for emesis; recover and save emesis.
d. For symptomatic antidepressant ingestions (tachycardia, wide complex QRS),
1) Consider administration of sodium bicarbonate 50 mEq IVP
e. For extrapyramidal dystonic reactions,
1) Consider administration of diphenhydramine 50 mg IVP
f. For symptomatic calcium channel blocker overdose,
1) Consider calcium chloride 500mg IVP.

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- 4. **Organophosphate Exposure (Malathion, Parathion)**
 - a. Refer to NERVE AGENT/ORGANOPHOSHATE PESTICIDE EXPOSURE TREATMENT PROTOCOL (II.F.2.B)

III. Management of Bites and Stings

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- A. Utilize universal precautions.
- B. Establish and maintain the airway, provide oxygenation and support ventilation as needed.
- C. Obtain vascular access as needed per patient condition.
- D. Human Bites:
 - 1. Provide appropriate wound care management.
 - 2. Consider splinting of extremity.
 - 3. A physician must immediately evaluate all human bites.
- E. Spiders, Snakes and Scorpions:
 - 1. Ice for comfort on spider or scorpion bite; DO NOT apply ice to snake bites.
 - 2. Consider splinting of extremity.
 - 3. For snakebite, consider applying venous constricting band.
 - 4. Bring in spider, snake or scorpion if captured and contained or if dead for accurate identification.
- F. Bees and Wasps:
 - 1. Remove sting mechanism from honey bees only by scraping out. Do not squeeze venom sac if this remains on stinger.
 - 2. Provide wound care.
 - 3. Observe patient for signs of systemic allergic reaction.
 - 4. Treat anaphylaxis per Allergic Reaction/Anaphylaxis Protocol.

CONTACT MEDICAL CONTROL

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- 5. **Possible orders post radio contact:**
 - a. Pain management per procedure as needed.
 - b. Immediately transport patients with severe envenomation or history of generalized allergic reaction immediately.

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IV. Special Considerations

- A. Gross decontamination should be initiated as quickly as possible on scene and continued enroute to hospital.
- B. Patients with exposure to toxic substances such as carbon monoxide, cyanide, methyl alcohol, etc. should not be monitored with pulse oximetry, as accurate measurement cannot be obtained.
- C. Burning of synthetics and plastics may emit cyanide. Consider the potential for cyanide gas exposure at burn scenes.
- D. All questions concerning toxic exposure should be directed to Medical Control.
- E. For all types of bites and stings, the goal of prehospital care is to prevent further inoculation and to treat allergic reactions.
- F. Alcohol inactivates the toxins in nematocysts of jellyfish and other coelenterates. You may use: rubbing alcohol, perfume, and liquor (at least 40%), or aftershave lotion.
- G. About 60% of patients who have experienced a generalized reaction to a bite or sting in the past will have a similar or more severe reaction upon reinoculation. This group of patients must be considered at high risk for anaphylaxis. In addition, a small group of patients will have anaphylaxis as a "first" reaction.

WEST MICHIGAN REGIONAL PROTOCOL

POISONING PROTOCOL

Number: II.B.5.
Date: 2-1-2007
Page: 4 of 3

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- H. Time since envenomation is important. Anaphylaxis rarely develops more than 60 minutes after inoculation.
 - I. In situations of potential ingestion or inhalation of petroleum distillates, do NOT induce vomiting. Monitor the patient's respiratory and mental status very closely.

7/2/98, 3/23/99, 12/28/99
11/29/04, 2/1/2007