Anaphylaxis

ANAPHYLAXIS
(and Anaphylaxis Prevention)

30 Second Review

Anaphylaxis
RN, LPN

DEF: A rapidly progressing, life-threatening allergic reaction.

S/S: Dyspnea, hives, intestinal irritation, and altered heart

Rhythm. Can progress to airway obstruction, shock, and

death.

RX: 1) Epinephrine 1:1000 0.3cc SQ,

2) Benadryl 50-100 mg IM

3) Oxygen 2-8L (NP or mask) or Ambu-bag (15L)

4) Transport to Emergency Room

5) While awaiting transport: Start IV, give nebulizer
treatment, may repeat Epinephrine in 5 minutes

SKILL LEVEL: RN, LPN

DEFINITION: A hypersensitivity reaction usually occurring within seconds to

minutes after exposure to an antigen. The reaction can move from

moderate symptoms to shock to death rapidly. Symptoms may

include flushing or pallor, cool clammy skin, itching, welts,

confusion or change in LOC, breathing difficulty and/or vascular

collapse.

Note: Generally, agents administered parenterally (injectables or

insect stings) are more likely to result in life-threatening or fatal

anaphylactic reactions than those ingested orally or administered

topically to mucous membranes. Medications administered orally,

such as aspirin or penicillin, however, have been associated with

fatal reactions.

DATA BASE:

Subjective: Patient is identified as being exposed to allergen or rapid onset of

objective features, even in the absence of notable history of

exposure. Sometimes the trigger is never discovered.

Objective: Clinical features-Anaphylaxis is usually characterized by some or

all of the following sequence of signs and symptoms. The sooner

symptoms develop after the initiating stimulus, the more intense

and dangerous the reaction may be.

- Generalized flush
- Pallor
- Cool clammy skin
- Urticaria
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- Swelling of the face, mouth or throat ("angioedema")
- Paroxysmal coughing
- Severe anxiety
- Confusion
- Change in LOC
- Dyspnea
- Wheezing
- Orthopnea
- Vomiting
- Cyanosis
- Shock

Plan:

Treatment: Check for allergies before administering medical treatment.

1. Transport patient immediately to hospital via ambulance. Any patient experiencing anaphylaxis should be hospitalized. Notify practitioner that transport has occurred, but do not delay transport.

2. Maintain airway. If possible, give Albuterol inhaler 2-4 puffs (or unit dose Nebulizer Treatment) immediately and again in 5 minutes as needed.

3. Start Oxygen O2 by nasal canula or mask at 4-8 L/min. If the patient has a slow ineffective respiratory rate, use Ambu-bag at high flow (15L)

4. Give the following medications:

   - Epinephrine  Give 0.3 ml. of 1:1000 epinephrine (May repeat in 5 minutes).

   - Benadryl 50-100 mg IM

5. If time allows while ambulance is enroute, start an IV and give intravenous fluid normal saline or lactated Ringer's solution rapidly to support blood pressure. In anaphylaxis, shock results from vasodilation and subsequent inadequate plasma volume. Consider running a liter or two of fluids in "wide open": 1000 ml per 15-30 minutes

6. Maintain a flow sheet with time, vital signs, and medications administered.

7. For patients with rapidly evolving symptoms of urticaria and/or angioedema of the face, mouth, or throat, give Benadryl 50-100mg IM and observe for improvement and/or call the medical provider.
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If worsening symptoms, consider moving to step 1 above, prepare for emergency transport.

8. For patients with mild symptoms of itching and flushing without dyspnea and with a slow onset of symptoms, see Urticaria protocols.

Complications:

Upper airway obstruction-Pharyngeal, uvular, or laryngeal edema, or any combination of these, can develop acutely. Observe respiratory status frequently. Be prepared to insert oral airway.

Lower airway obstruction-Bronchospasm may be so severe that decreased tidal volume makes wheezing inaudible.

Hypotension-Frequent pulse and blood pressure determinations should be done. Use Trendelenburg’s position if possible.

Cardiac arrhythmias-Arrhythmias may arise owing to hypoxia, especially in adults. Be ready to begin CPR if the patient’s condition deteriorates.

Aspiration of gastric contents-Vomiting often accompanies anaphylaxis, especially with Hypoxic seizures or Cardiac arrest.

Nursing Education:

• Suspected overdose of narcotic/opiate is treated with Narcan, not Epinephrine and Benadryl. (see “Poisoning/Overdose”)

Agents commonly associated with anaphylaxis include the following. This list is not exhaustive.

• Antibiotics (especially penicillin and its semisynthetic derivatives)
• Biologicals
  Nonhuman serums
  Gamma globulin
  Influenza vaccine
  Tetanus toxoid
  Measles and other egg-based vaccines
• Injectable medications
  Imferon (iron dextran injection)
  Dextran
• Local anesthetics
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- Aspirin
- Hymenoptera stings (bee, yellow jacket, wasp, and hornet)
- Allergic extracts (skin-testing and treatment solutions)
- Foods (especially eggs, nuts, and shellfish)

Before administering or prescribing any medication, inquire carefully for a history of reactions. Note: anaphylactoid reactions can occur without prior known exposure and sensitization.

Minimize the use of biologic products (e.g., horse antiserum, unnecessary boosters of tetanus toxoid). After receiving an agent capable of inducing anaphylaxis (e.g. injection of antibiotic, allergy shot, vaccine, etc.) the patient should be required to remain in the clinic for at least 15 minutes.

Symptoms beginning within 15 minutes after administration of the inciting agent require the most expedient management.

Patient teaching:

Avoid allergen. If a patient is allergic to insect venom, he should be counseled not to go barefoot, to avoid fields of flowers, ripe fruit, bright-colored clothing and perfume during warm weather.

Follow-up: An allergy label should be placed on the front cover of the patient's health care record. This note must reflect the date of the reaction. Enter the information in the DOC 400 as well.

APPROVED:

Medical Services Manager _________________________ Date __________

Chief Medical Officer ___________________________ Date __________

Medical Director _______________________________ 2/24/2015

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