Chapter 21
Allergic Reactions

Overview

- Assessment of Allergic Reactions
  - Causes of Allergic Reactions
  - Signs and Symptoms of Allergic Reactions

- Emergency Care for Patients with Allergic Reactions
  - Airway Management
  - Administration of Medication

Assessment of Allergic Reactions
Assessment of Allergic Reactions

- Allergic reaction
  - An exaggerated immune response to a substance that comes into contact with the body

*A severe allergic reaction is called anaphylaxis or an anaphylactic reaction.*

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Assessment of Allergic Reactions

- Allergen
  - A substance that commonly causes allergic reactions, such as insect bites or stings, foods, plants, and medications

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Assessment of Allergic Reactions

- Causes of allergic reactions
Assessment of Allergic Reactions

- Signs and symptoms
  - Skin
    - Warm tingling feeling in the face, mouth, chest, feet, and hands
    - Itching
    - Hives
    - Red skin (flushing)
    - Swelling to face, neck, hands, feet, and/or tongue

- Signs and symptoms
  - Respiratory system
    - Patient may state he feels a tightness in his throat/chest
    - Cough
    - Rapid breathing
    - Labored breathing
    - Noisy breathing
    - Hoarseness (losing the voice)
    - Stridor
    - Wheezing (audible without stethoscope)

Be prepared to manage the patient’s airway. Apply high-flow oxygen immediately.

- Signs and symptoms
  - Cardiac
    - Increased heart rate
    - Decreased blood pressure
Assessment of Allergic Reactions

- Generalized findings
  - Itchy, watery eyes
  - Headache
  - Sense of impending doom
  - Runny nose
  - Decreasing mental status

Assessment findings that reveal shock (hypoperfusion) or respiratory distress indicate the presence of a severe allergic reaction.
Information obtained in the initial assessment may be enough to suggest the need for administration of epinephrine.

Emergency Care for Allergic Reaction

- Perform initial assessment
- Perform focused history and physical exam
  - History of allergies
  - What patient was exposed to
  - How they were exposed
  - What effects
  - Progression
  - Interventions
- Assess baseline vital signs and SAMPLE history

Emergency Care for Allergic Reaction

- Serious signs and symptoms
  - Administer oxygen if not already done in the initial assessment
  - Determine if patient has prescribed preloaded epinephrine available
  - Facilitate administration of preloaded epinephrine
  - If patient does not have epinephrine autoinjector available, transport immediately
If the patient has an epinephrine autoinjector and is having a severe reaction, the goal is to gain enough information about the patient’s condition to rapidly administer the medication.

Epinephrine
- A medication used to dilate the bronchioles, prevent tissue swelling, constrict the blood vessels, and increase the ability of the heart to pump blood

Epinephrine
- Autoinjector
  - A device that administers a preset dose of medication in a safe manner, by way of an intramuscular self-injection
Epinephrine

- **Indications**
  - Assessment reveals a patient with a severe allergic reaction
    - Respiratory compromise and/or hypoperfusion

Epinephrine

- **Contraindications**
  - None in an emergency situation

Epinephrine

- **Mechanism of action**
  - Actions
    - Dilates the bronchioles
    - Constricts blood vessels
Epinephrine

- **Dosage**
  - Adult—one adult autoinjector (0.3 mg)
  - Infant and child—one infant/child autoinjector (0.15 mg)

Epinephrine

- **Side effects**
  - Increases heart rate
  - Pallor
  - Dizziness
  - Chest pain
  - Headache
  - Nausea
  - Vomiting
  - Excitability, anxiousness

Use of the Autoinjector
Emergency Care of Allergic Reaction

- Patient without signs of respiratory distress or shock (hypoperfusion)
  - Continue with focused assessment
  - Patient not wheezing or without signs of respiratory distress or shock (hypoperfusion)

Emergency Care of Allergic Reaction

- Patient without signs of respiratory distress or shock (hypoperfusion)
  - Administer high-flow oxygen and transport

Summary

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