Chapter 22
Poisoning and Overdose

Overview
- History of Poisoning
- Types of Toxins
  - Ingested Toxins
  - Inhaled Toxins
  - Injected Toxins
  - Absorbed Toxins
- Airway Management
- Use of Activated Charcoal

History of Poisoning
- Toxin
  - Any substance, including medications, that produces adverse effects when it enters the body
History of Poisoning

- Focused history and physical exam
  - SAMPLE and OPQRST
    - Important questions to consider asking patient
      - What substance?
      - When did you ingest/become exposed?
      - If an ingestion, how much did you ingest?
      - Over what time period?
      - Interventions?
      - How much do you weigh?

Types of Toxins

- Ingested
  - Signs and symptoms
    - History of ingestion
    - Nausea
    - Vomiting
    - Diarrhea
    - Altered mental status
    - Abdominal pain
    - Chemical burns around the mouth
    - Different breath odors

Types of Toxins

- Ingested
  - Emergency medical care
    - Remove pills, tablets, or fragments with gloves from patient’s mouth, as needed, without injuring oneself
    - Consult medical direction for administration of activated charcoal
    - Bring all containers, bottles, labels, etc. of poison agents to receiving facility
Types of Toxin

- Inhaled
  - Signs and symptoms
    - History of inhalation of toxic substance
    - Difficulty breathing
    - Chest pain
    - Cough
    - Hoarseness
    - Dizziness
    - Headache
    - Confusion
    - Seizures
    - Altered mental status

It is of the utmost importance to protect the providers. If the scene is not safe, do not enter.

Types of Toxins

- Inhaled
  - Emergency medical care
    - Have trained rescuers remove patient from poisonous environment
    - Give oxygen, if not already done in the initial assessment
    - Bring all containers, bottles, labels, etc. of poison agents to receiving facility
Types of Toxins

- Injected
  - Poison enters body through a puncture
    - Insect bites
    - Spider bites
    - Snake bites
    - Stings and bites of marine animals
    - Injected into vein with a syringe and needle

Types of Toxins

- Black widow spider

Types of Toxins

- Brown recluse spider
Types of Toxins
- Jellyfish

Types of Toxins
- Sea urchin

Types of Toxins
- Injected
  - Signs and symptoms
    - Weakness
    - Dizziness
    - Chills
    - Fever
    - Nausea
    - Vomiting
Types of Toxins

- Injected toxins
  - Emergency medical care
  - Airway and oxygen
  - Be alert for vomiting
  - Bring all containers, bottles, labels, etc. of poison agents to receiving facility

Types of Toxins

- Absorbed toxins
  - Signs and symptoms
    - History of exposure
    - Liquid or powder on patient’s skin
    - Burns
    - Itching
    - Irritation
    - Redness

It may be necessary to have other rescuers with appropriate gear decontaminate the patient prior to treatment and transport.
Types of Toxins

- Absorbed
  - Emergency medical care
    - Skin—remove contaminated clothing while protecting oneself from contamination
    - Powder—brush powder off patient, then continue as for other absorbed poisons
    - Liquid—irrigate with clean water for at least 20 minutes (and continue en route to facility if possible)
    - Eye—irrigate with clean water away from affected eye for at least 20 minutes (and continue en route to facility if possible)

For some substances, it is best to flush for 20 minutes prior to transport.

Contact medical direction to determine if the patient should have the area of contact flushed with water for the full 20 minutes prior to transport.

Airway Management
Airway Management

- A patient’s condition may deteriorate
- Continue to assess patient for airway difficulties and manage as learned previously

Use of Activated Charcoal

- Medication name
  - Generic
    - Activated charcoal
  - Trade
    - SuperChar™
    - InstaChar™
    - Actidose™
    - Liqui-Char™

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Use of Activated Charcoal

- **Indications**
  - Poisoning by mouth

Use of Activated Charcoal

- **Contraindications**
  - Altered mental status
  - Ingestion of acids or alkalis
  - Unable to swallow

Use of Activated Charcoal

- **Dosage**
  - Adults and children: 1 gram activated charcoal/kg of body weight
  - Usual adult dose: 25-50 grams
  - Usual infant/child dose: 12.5-25 grams
Use of Activated Charcoal

- Administration technique
  - Shake the container thoroughly to suspend the medication in the container

Use of Activated Charcoal

- Administration technique
  - Pour the liquid into a container
  - Because the medication looks like mud, covering the container with a lid and using a straw may make it easier for the patient to drink it

Use of Activated Charcoal

- Administration technique
  - Persuade the patient to drink the full dose. If the patient takes a long time to drink the medication, the charcoal will settle; shake or stir the liquid again
Use of Activated Charcoal

- **Mechanism of action**
  - Binds to certain poisons and prevents them from being absorbed into the body
  - Not all brands of activated charcoal are the same
    - Some bind much more poison than others; so consult medical direction about the brand to use

- **Side effects**
  - Black stools
  - Some patients, particularly those who have ingested poisons that cause nausea, may vomit
    - If the patient vomits, the dose should be repeated once
Use of Activated Charcoal

- Reassessment strategies
  - Be prepared for the patient to vomit or further deteriorate

Summary

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