

General Toxicology

Presented

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Learning Objectives

- ✘ Definition of poison.
- ✘ Classification of poisons.
- ✘ Factors affecting poisons action.
- ✘ Management of poisoning cases .



Definition

Any substance is introduced into the body leading to serious effects (injury, impair, kill)

Routes of intoxications :-

1- Ingestion (oral) (Solids, Liquids)

2- Inhalation (breathing) (Sprays ,vapors)

3- Dermal (skin)

4- Ocular

5- Injection



Nature

Solid, liquid , gas

Organ Toxicity

Hepatotoxicity

nephrotoxicity

Classification of Poisons

Action

Local

Systemic

Mixed (local , systemic)

Accumulative

Acute

**Short term (less than
two weeks)**

Chronic

**Long term (life time)
More than three months**

Types of Toxic Exposure

Sub-acute

(2- 4 weeks)

Sub-chronic

**Repeated exposures
(less than three months)**

Chemicals

household cleaning
products

Foods

Some mushrooms

Types of Toxins

Drugs

Drug overdose
Vitamins (excess of A and D)

Factors affecting poisons action

Related to the poison

1. Amount
2. Method of administration
3. Form

Related to the patient

1. Stomach (empty , gastric content and secretion)
2. Age
3. Disease
4. Tolerance
5. Idiosyncrasy
6. Hypersensitivity

DIAGNOSIS

History Taking

- Patient himself or relatives
- The name and The amount of toxin
- The time that the poisoning occurred ,
- The age and weight of the person who was poisoned
- Signs and symptoms

Examination

Conscious level

Vital signs

Investigations

Toxicological screen based on the history and physical exam.

Blood sample

Urine sample

Gastric sample

Clinical Picture

1. The signs and symptoms seen in poisoning are so wide and variable that there is no easy way to classify them.
2. Some poisons enlarge the pupils, while others shrink them.
3. Some result in excessive drooling, while others dry the mouth and skin.
4. Some speed the heart, while others slow the heart.
5. Some increase the breathing rate, while others slow it.

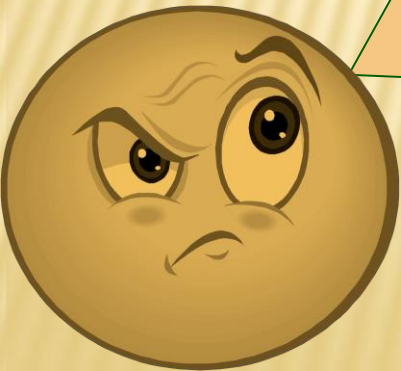


Toxidromes

Consist of groups of signs and symptoms found together with a given type of poisoning.

Anti-cholinergic toxidrome:

- Rapid heart rate
- Dilated pupils
- Dry hot skin
- Retention of urine
- Mental confusion
- Hallucinations , Coma



Unconscious patient

“Comatose”

Conscious patient



Treatment of Poisoning Case

UNCONSCIOUS PATIENT

Life-Saving Measures :-

ABC : Airway-Breathing- Circulation

Decontamination

A-General decontamination:-Remove clothes + wash the body

B- Gastric decontamination

1. Gastric lavage
2. Activated charcoal
3. Cathartic

C- Elimination

Forced diuresis - Haemodialysis

D- Antidote

CONSCIOUS PATIENT

1-Decontamination

A-General decontamination:- Remove clothes + wash the body

B- Gastric decontamination

1. Emesis (mechanical or medical “ ipecac”)
2. Gastric lavage
3. Activated charcoal
4. Cathartic
5. Whole bowel irrigation

2- Elimination

Forced diuresis - Haemodialysis

3- Antidote

CONTRAINDICATIONS

- **Emesis (Ipecac)**

- Comatose, corrosive, kerosene, central depression, antiemetic effects, more than 24h

- **Gastric Lavage**

- Corrosive , kerosene, convulsions, more than 24 hr

- **Charcoal**

- Corrosive , kerosene

- **Cathartic**

- Diarrhea

- **Forced Diuresis**

- Active form of poison, shock, renal impairment, pulmonary edema, lack of monitoring

Thank you

Thank you



Thank you

Thank you