PRINCIPLES IN MANAGEMENT OF TOXICITY CASE

Practical Clinical Toxicology

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Title of the course: *Practical Clinical Toxicology*

Level: 5th Class, 1st Semester

Credit hours/week: 1

Reference text: *1- Gossel TA, Bricker JD, (Eds.); Principles of Clinical Toxicology; latest edition. 2-Viccellio P, (Ed.); Handbook of Medicinal Toxicology; latest edition.*

Objectives: To teach students the applications of theprinciples of drugs and chemicals-induced toxicity in humans, and gain experience in evaluation steps and treatment measures based on sample analysis and interpretation of toxicity signs and symptoms.

No	Lecture title
1	Laboratory Principles or Toxicological Screening.
2	Over the counter drugs: Case on Acetaminophen poisoning; Salicylates; evaluation of urine salicylates.
3	Urine analysis of toxins and chemicals.
4	Cardiac glycosides toxicity: Digitalis.
5	Cases on toxicity with foods and dietary supplements.
6	Identification of some common poisons in biological samples: Arsenic; cyanide; strychnine; Salicylates; Phenothiazine derivatives; barbiturates
6	Evaluation of cases of toxicity with anti-parkinsonian drugs.
7	Evaluation of drug toxicity on human.

CLINICAL STRATEGY FOR TREATMENT OF THE POISONED PATIENT

The treatment of the poisoned patients in the emergency department include the following:

Stabilization of the patient.

CLINICAL HISTORY IN THE POISONED PATIENT

HISTORICAL DATA INCLUDE:

Type of toxin.

GENERAL NON-SPECIFIC ASSESSMENT

Support breathing

Administration of oxygen

Cardiovascular stabilize B.P and normalize H.R

CNS consciousness control convulsions

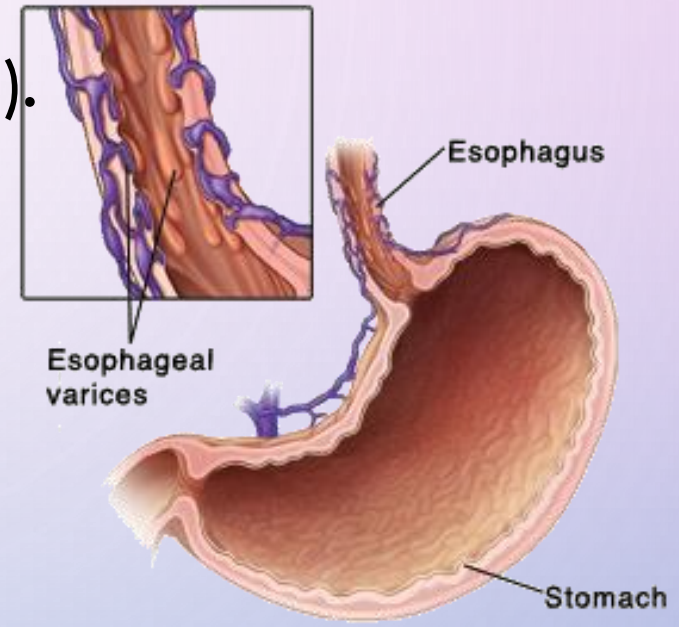
MAJOR APPROACHES FOR TOXICITY MANAGEMENT

1. FIRST PREVENTION OF GIT ABSORPTION OF TOXIN

- GASTRIC EMPTYING: (Dilution, emesis, gastric lavage, Activated charcoal, cathartics, WBI)

- CONTRAINDICATIONS

1. Caustic acid/alkali ingestions.
2. Hydrocarbon ingestion? Why (aspiration).



A. Dilution:

1-2 capfuls for child, 2-3 for adults.

- B. EMESIS BY:

- 1. IPECAC SYRUP

- INDICATIONS

1. Ingestion at home (home use).
2. Ingestion by infants older than six months.

- DOSE OF IPECAC SYRUP
- Adults and children over 6 years: 30ml once.

- COMPLICATIONS
  - Aspiration pneumonitis.

- 2. APOMORPHINE
- Is a morphine derivative
- Produce rapid emesis 3-5 min (direct stimulation of CRTZ)

C. GASTRIC LAVAGE

- Usefulness depend on time (10-20%) of gastric content removed after one hour of ingestion
- DOSE:10 ml/kg/lavage of 0.9% saline up to 400ml in adult

- GASTRIC LAVAGE
- INDICATIONS

1. Ingestion of drug or toxin that still in stomach (less than 1hr).
2. Ingestion of drug or toxin that delay gastric emptying or EC, SR preparations.

- COMPLICATIONS
- Inadvertent tracheal intubation

D. Multidose Activated Charcoal

- Dosing:0.5-1.0 g/kg every 1 to 4 hours

E. WBI (WHOLE BOWEL IRRIGATION)

- Cleanses the bowel by enteral administration of large amounts of PEG-Electrolyte Solution which induce a liquid stool.

- CONTRAINDICATIONS

Paralytic ileus or small bowel obstruction.

REFERENCES

1- GOSSEL TA, BRICKER TD, (EDS.); PRINCIPLES OF CLINICAL TOXICOLOGY; LATEST EDITION.

2- VICCELLIO P, (ED.); HANDBOOK OF MEDICINAL TOXICOLOGY; LATEST EDITION.

3- JOURNALS OF PHARMACOLOGY AND TOXICOLOGY