**General toxicology**

Lead is an example of a chemical poison from work or the environment.

*Classifications of poisons:*

-according to their mode of action is the most important and the best classification IMP:

Poisons with local action, like corrosives (acid).

Poisons with remote actions, like barbiturates.

Poisons with local and remote actions, like mercury.

*Factors affecting the action of poisons:*

\*In tolerance: increasing the dose to get the same effect.

\*conditions of the stomach: cyanide needs HCL in the stomach to work.

**Diagnosis of poisoning:**

*Clinical picture:*

Fever: salicylates are antipyretics but cause fever in poisoning.

Radiopacity of poisons: e.g. enteric coated tablets like iron.

*Chemical analysis:*

The best sample taken from the living person is the gastric lavage, especially after 1-2 hours. IMP

**General lines of treatment of poisoning:**

*Decontamination*:

inhalers: carbogen is 95% O2 and 5% CO2, the CO2 is important as it stimulates the respiration IMP.

*Removal of unabsorbed poisons:*

Emesis: it is contraindicated to use water and salt because it may cause heart problem.

The chemical method (syrup of ipecac) is the best method IMP.

*Gastric lavage*: if there is chocking and air coming out it means the tube is in the trachea.

*Inactivation of poison remaining in the stomach:*

***Physical antidotes***:

The best local antidote is the charcoal (better than gastric lavage because it’s non-invasive).

It adsorbs chemicals and works like a magnet.

***Household antidotes***

The doctor asked us to choose the most used household antidote locally so we all chose milk, so milk is the most common local antidote. IMP

In Egypt lemon is the most common and in England tea is the most common.

*Enhancement of excretion:*

Alkaline diuresis: phenobarbital= barbituric acid.

Acid diuresis: amphetamINE, kinIN, phencyclidINE are used to treat alkalINE.

*Administration of physiological antidote:*

Antagonists: the best drug and most commonly used is IV diazepam 10 mg.

Disturbances of body temperature: Correction: rectal temperature less than 36 degrees.

Respiratory failure: best way of diagnosis is by ABG.

ABG:

O2 = 60 is dangerous (respiratory failure).

CO2= 40 is dangerous (respiratory failure).

The treatment of respiratory failure is the same as the treatment of coma.

1st treatment of a comatosed intoxicated patient is ABC before any of the 8 general lines of treatment IMP.

**MCQs**

1. the most rapid form of poison is :

A) Solid

B) Gas\*\*\*

C) Powder

D) Solution

2. in uncomplicated stable case of poisoning best line of Rx is :

A) Antishock measures

B) Physiological antidots

C) Supportive care\*\*\*

D) Induction of vomiting

3.which of these is a hepatotoxic poison :

A) Alcohol\*\*\*

B) Atropine

C) Morphine

D) Amphetamine

4.Which of the following causes blindness:

A) Mercury.

B) Amphetamine.

C) Morphine.

D) Atropine

E) None of the above\*\*\*

Methanol Causes Blindness

5.cyanide poisoning is ineffective in cases :

A) Taking low dose

B) Have low acid in stomach

C) Have hyperacidity

D) No acid in stomach – achloride\*\*\*

6.emesis with syrup of ipecac is contraindicated in:

A)coma

B)convulsions

C)absent gag reflex

D)corrosive poisoning

E)all of the above\*\*\*

F)none on the above

7.activated charcoal acts by:

A) oxidation

B) reduction

C) precipitation

D) adsorption\*\*\*

E) neutralization

8.activated charcoal is ineffective in poisoning of:

A)acetaminophine

B)phenothiazines

C)barbiturates

D)ethyl alcohol\*\*\* (insha Allah it is the correct answer)

E)salicylates

9.the following factors influence the action of the poison except:

A) the dose

B) the state of the poison

C) colour of the poison\*\*\*

D) solubility of the poison

E) route of administration

10.the following factors influence the action of the poison exept:

A)the size of the stomach\*\*\*

B)age of the patient

C)tolerance

D)health of the patient

E)hypersenitivity

11.forced alkaline diuresis helps excretion of:

a-strychnine

b-amphetamine

c-salicylates\*\*\*

d-digoxine

e-cocaine

12.acute atropine toxicity induse all the following except:

a-mitosis\*\*\*

b-weak rapid pulse

c—hyperpyrexia

d-dry mouth

e-red and dry skin

13.rice water diarrhea occurs in a toxicity with:

a-arsenic\*\*\* (again, insha Allah it is the right answer)

b-mercury

c-lead

d-iron

e-phosphorus

14.Eye wash is used in cases exposed to:

a. Organophosphorus insecticides.\*\*\*

b. Corrosive fumes.

c. Alkaline poison.

d. Volatile poison.

e. Irritant gases.

15.The active constituents in alkaline diuresis:

a. Dextrose.

b. Saline solution.

c. Dextrose 50%.

d. Na bicarbonate. \*\*

e. Ascorbic acid.

16.when contaminted,the eyes are flushed with:

saline

17.a child ingested unknown poison, he came to ER.. what is the most imp. thing to do:

supportive care

18.forced acid diuretics used in :

alkaline poisons

19.the active content of alkaline diuretics is :

sodium bicarbonate

20. Important management of the poisoned patient:

 supportive care

21. Best Physical antidotes:

Activated charcoal

22.Antidotes that act locally:

 Potassium permanganate 1/5000 solution

23. Forced Acid diuretics:

 amphetamines

24.Stage 2 in coma classification PaO2 more than 60mm.Hg 25. Comatose patient 1st step in management:

 Care of respiration

26.forced acid dieresis helps excretion of:

a. strychnine

b. amphetamine\*\*\*

c. salicylates

d. digoxine

e. cocaine

27 in death due to alcohol poisoning blood for chemical analysis should be collected preferably from :

a) heart

b) axillary or femoral vein \*\*\*

c) pleural cavity

d) abdominal cavity

big thanks to: Mona Alfaraidi

if there are any notes contact me

b.m.assery@gmail.com

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