Iron Poisoning
Objectives

- Compounds
- Mode of poisoning
- Toxicokinetics
- Actions
- Clinical picture
- Investigations
- Treatment
1- Compounds:

Oral Iron Preparations:

Ferrous Sulphate
Ferrous Lactate
Ferrous Fumarate

Parenteral Iron Preparations:

Iron Dextran “Imferon”.

Uses:

Major Roles In Human Body:
Mode of Poisoning

Accidental

Suicidal

Homicidal
3- Toxicokinetics:

Absorption:

From GIT:

20% of total ingested iron is absorbed
Daily iron requirement is 15 mg.

In intoxication:

Excretion:

In stool - In bile - In urine
Early: Diffuse Hemorrhagic Gastritis and Enteritis

Late: Heals by pyloric Obstruction And Intestinal scarring & obstruction

Cellular Dysfunction

Lactic Acidosis

Local

Remote

Toxic actions
Clinical Picture:
4 Stages
1st Stage: GIT Stage.

Onset:

Character:

Vomiting:
  1st: Black - Late: Bloody

Abdominal Colic:

Diarrhea:
  Black - Late: Bloody

Shock:

Prognosis:

May progress to second stage
2nd Stages: Asymptomatic Stage.

Onset: 6 - 12 hrs

Character: GIT symptoms subside

Prognosis: Full recovery or Progress to 3rd stage.
3rd Stages:

Onset:

Character:

Shock
Seizures
Coagulopathy
Hepatic failure
Death

Prognosis:

Very dangerous stage
4th Stages: Intestinal Obstruction Stage.

Onset:

Character:

Prognosis:

Death rarely occur due to Intestinal Obstruction
Investigations

Serum Iron Level:

Arterial Blood gases:
Plain X ray on the Abdomen:

**Mechanism:**
Iron gives radio opaque shadows on X rays.

**Advantages:**
Can be seen in the stomach within 4 hours.

**Disadvantages:**
Absence not indicate a trivial ingestion
Treatment
Emergency measures

A.B.C.
Hypovolaemic Shock
Acidosis

Decontamination

Emesis: √
Gastric Lavage: √
Abdominal X ray
WBI √
**Deferoxamine:**
- Indications
- Dose
- End point of therapy

**Antidote**

**Elimination Enhancement**

**Haemodialysis Exchange transfusion**
Thanks!
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