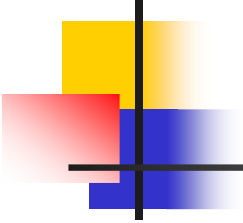
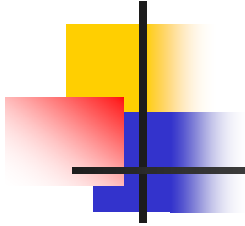


Corrosives

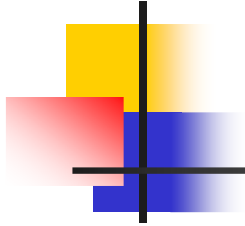


Definition

- **A corrosive poison fixes, destroys and erodes the surface with which it comes in contact as mucous membranes and skin.**
- **It may have remote action.**



CLASSIFICATION



- **Mineral acids**

 - Sulphuric acid.**

 - Nitric acid.**

 - Hydrochloric acid.**

- **Organic acids**

 - Oxalic acid.**

 - Carbolic acid.**

- **Mineral salts**



Classification

- **Alkalis**

Ammonia.

Calcium hydroxide.

Caustic potash & Soda.

Ammonium hydroxide.



Other corrosives

- **Heavy metals.**
- **K permanganate.**
- **H₂O₂.**
- **Button battery.**

House hold product



Sources

Common acid containing sources

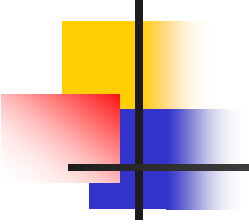
- Toilet bowl cleaners.
- Rust removing products.
- Metal & cement cleaning products.

common alkaline containing sources

- Drain cleaning products.
- Oven cleaning products.
- Swimming pool sanitizers.
- Automatic dishwasher detergent.
- Bleaches.

MODE OF ACTION

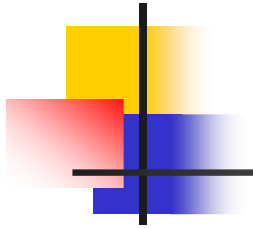
(ACIDS)

- 
-
- **Extraction of water from tissues (hygroscopic).**
 - **Coagulation of surface proteins with eschar formation.**
 - **Lesions mainly in the stomach.**
 - **No remote systemic action with exception of shock**
 - **In dilute solutions they act as irritants.**



Mode of action (alkalis)

- **Liquefactive necrosis leading to extensive penetrating lesions.**
- **Combine with fat and protien giving a soft slimy appearance.**
- **Lesions are usually located in the esophagus.**



Course of the injury

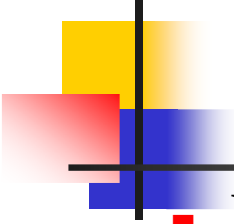


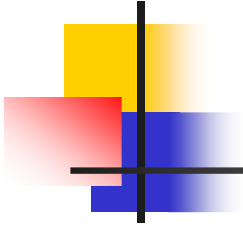
Signs and Symptoms

Onset : immediate

■ **Symptoms:**

- **Burning sensations (mouth, throat, esophagus, stomach).**
- **Intense thirst.**
- **Dysphagia and drooling of saliva.**
- **Hoarseness of voice.**
- **Hematemesis or melena.**

- 
-
- **Vomitus is either acidic or alkaline depending on substance swallowed.**
 - **Mouth & lips are corroded**
 - **Tongue;swollen or shriveled**
 - **Teeth: chalky white - Sulphuric acid poisoning**
yellowish - Nitric acid poisoning
 - **Constipation & scanty urine with corrosive acids**
 - **Bloody diarrhea with alkalis**



- Endoscopic examination:
- Investigations:
 - CBC, ABG, Ocult blood test

CAUSE OF DEATH

complication



IMMEDIATE

- Shock
- Suffocation: edema/spasm of glottis , RDS
- Gastric perforation.
- DIC

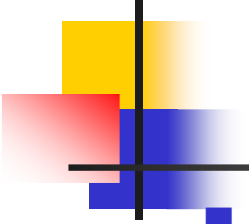
DELAYED (quantity of poison small)

- Hypostatic pneumonia
- Esophageal stricture :(emaciation and malnutrition)
- Secondary infections



TREATMENT

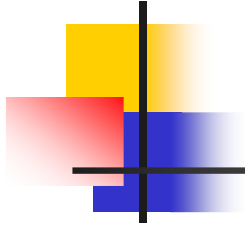
- **Stomach tube , emetics and nutralization are contraindicated**
- **Dilution.milk**
- **ABC and stablization of the patient**

- 
-
- **Morphine: to relieve pain**
 - **IV fluids: to compensate fluid loss**
 - **Steroids: Shock**

To prevent esophageal strictures

Keep the airway patent

- **Tracheostomy: Acute edema of glottis.**
- **Give oxygen**



- **Keep the patient NPO.**
- **Nutrient substances are given by IV route for about a week.**
- **Try liquids, soft food and finally a regular diet.**
- **Antibiotics to prevent infection.**



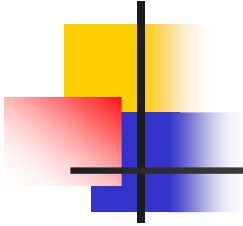
MEDICO LEGAL ASPECTS

Attempted Suicides:

- **Not seen now a days due to use of less painful substances like barbiturates, narcotics & organo-phosphorous compounds.**

For Homicides:

- **Rarely; because of taste, immediate local action & physical changes it produces in food.**



Vitriolage:

Throwing of a corrosive on face out of jealousy or rage.



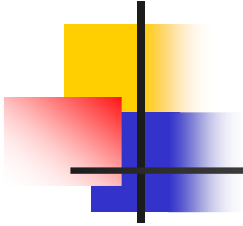
VITRIOLAGE

- **Throwing of any corrosive on a person with malicious intent.**
- **These fluids are usually thrown on face for destroying vision or causing facial disfigurement.**



TREATMENT

- **Wash the corrosive acid with large amount of water and soap or dilute solution of sodium or potassium bicarbonate.**



- **Eyes: Washed with large amount of water and irrigated by 1 % solution of sodium bicarbonate.**
- **Eye drops containing steroids and antibiotics are helpful**

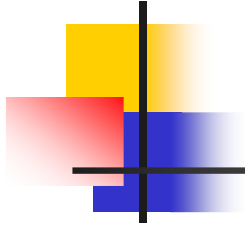
Carbolic acid

Mode of action

- Corrosive
- Narcotic
- Anesthesia and necrosis of skin

Signs and symptoms

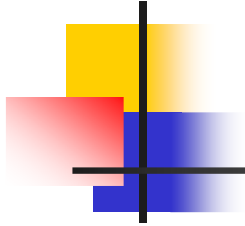
- Burning sensation
- Giddiness, convulsions
- Coma
- Carboluria: Greenish color urine that becomes dark on exposure to air due to oxidation of pyrocatechol and hydroquinone



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- **Investigation**
 - **Cause of death**
 - **Treatment**

Oxalic acid





Hypocalcemia

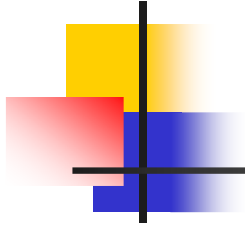
-Tetany

- renal impariment

- convulsion

-Ttt

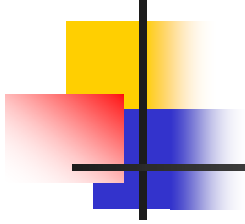
-Ca by any route



Iodine toxicity

ttt

gastric wash by starch



THANK YOU