

INTRODUCTION:

- Is an oily liquid found under the ground in several parts of the earth.
- The refined oil is known as kerosene.
- Others are separated during processing and classified into 2 groups according to their boiling point in relation to kerosene.
- Lighter or lower boiling point (gasoline, hexane, petrol, octane etc)
- Heavier or higher boiling point (lubricating oils, vaseline and paraffin)



ACTION:

- ✘ It causes local irritation to the mucosa of the GIT, and after absorption it has neurotoxic, nephrotoxic, and respiratory depressing effects.



SIGNS AND SYMPTOMS:

On Ingestion:

* Locally:

Irritation of oral mucosa and kerosene taste.

* GIT:

Sensation of burning in the throat, nausea, vomiting, colicky pain and diarrhea; breath, vomit and urine smells of kerosene.

* RS:

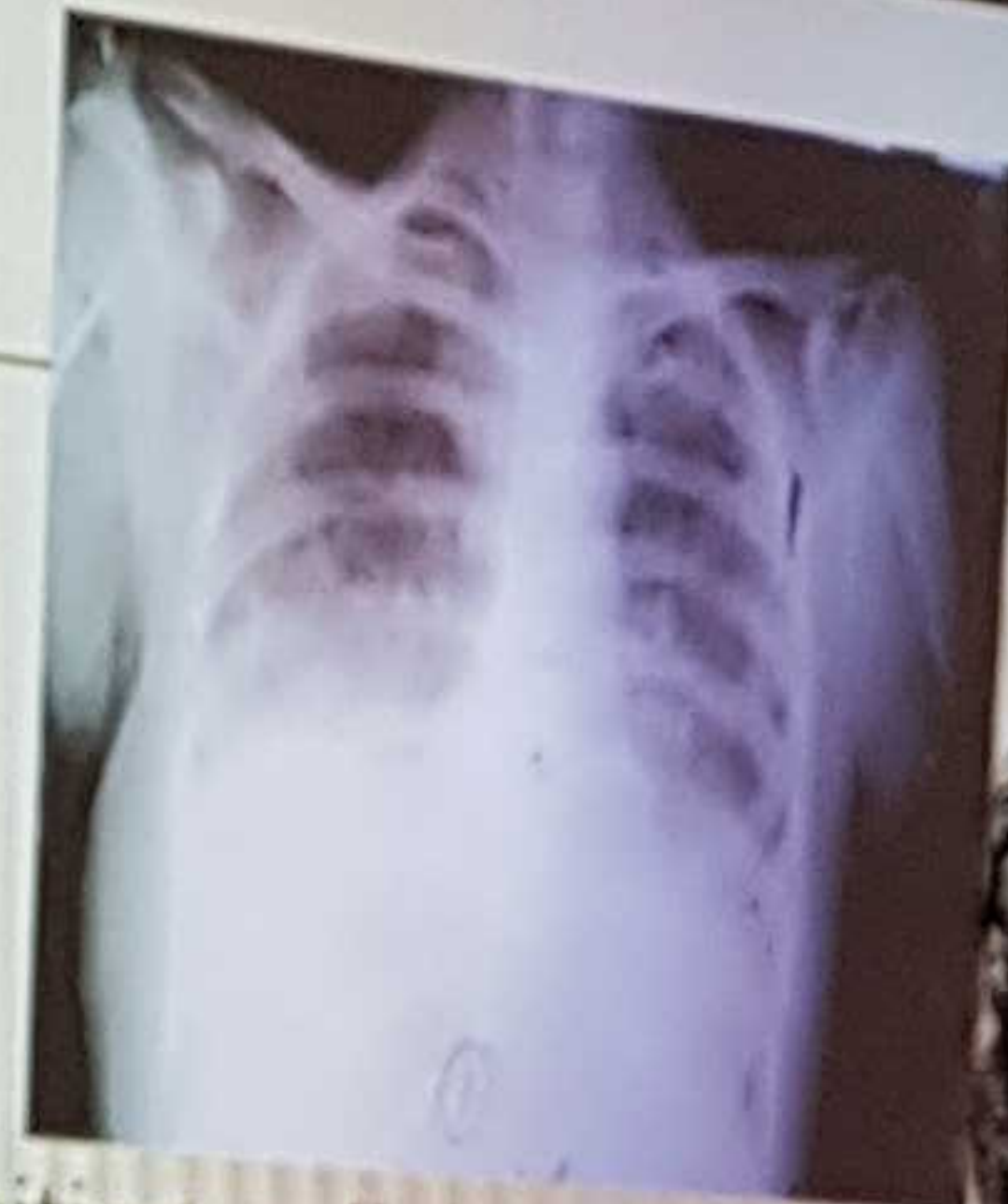
Cyanosis, bronchopneumonia, pulmonary edema, slow and shallow respiration.

* CNS:

Giddiness, headache, lethargy/drowsiness, restlessness, weakness, muscle twitching, seizures and coma.

* Others:

Pyrexia, arrhythmias, hemolytic anemia, acute renal failure, hepatotoxicity and bone marrow suppression.



- ✘ Inhalation of fumes causes choking, cough, respiratory distress, pyrexia, headache, vertigo, nausea, vomiting and lung complications, followed by intense excitement, hallucinations and convulsions.
- ✘ In fatal cases, cyanosis, unconsciousness and coma precede death.



CHRONIC POISONING:

Principal symptoms are;

- ✘ Dizziness
- ✘ Weakness
- ✘ Weight loss
- ✘ Anemia
- ✘ Nervousness
- ✘ Pain in limbs and peripheral numbness

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✘ Fatal dose: 10-50 ml.

✘ Fatal period: Few hours.



TREATMENT:

- ✘ In case of cutaneous exposure, decontamination is done by removing the clothing and thoroughly washing the skin with soap and water.
- ✘ • In case of inhalation, the patient must be removed to the open air and artificial respiration is given. The rest of the treatment is symptomatic.
- ✘ • In case of ingestion, supportive measures are the lifeline of treatment. The patient needs to be observed for at least 24 h in the hospital for any signs of kerosene toxicity.
- ✘ i. Gastric lavage and emesis are contraindicated, except:
 - When large amount of kerosene has been ingested.



- ✘ The stomach should be washed out with warm water containing 5% sodium bicarbonate.
- ✘ Its absorption can be slowed by giving 250ml of liquid paraffin orally, followed by a saline cathartic.

POSTMORTEM APPEARANCE:

- ✘ i. Acute gastroenteritis and kerosene odor may be observed on opening the chest and abdominal cavity.
- ✘ ii. *Stomach*: Petechial hemorrhages with congested mucosa.
- ✘ iii. *Lungs*: Petechial hemorrhages, congested, edematous and bronchopneumonia.
- ✘ iv. Degenerative changes in the *liver* and *kidneys* and hypoplasia of the bone marrow occur after prolonged period of inhalation.
- ✘ v. Organs are congested, and other signs of asphyxia may be seen.
- ✘ In case of suspected death from kerosene, the lungs, brain and other viscera should be preserved in saturated saline for chemical analysis

MEDICO LEGAL ASPECTS:

- ✘ In north India, it accounts for about 50% of infants and children brought to hospital for accidental poisoning, who have taken kerosene mistaking it for water.
- ✘ • Kerosene is occasionally used for self-immolation.
- ✘ • Homicidal attempts by pouring kerosene on clothes and igniting them are common in case of dowry deaths in India.
- ✘ • Inhalation of volatile hydrocarbons is common abuse in adolescents and young adults for recreation, similar to drugs and alcohol.