

## **Poisons Treatment**

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### **ACETAMINOPHEN**

- Gastric lavage within 1 hour
- IV charcoal can be used in patients presenting within 1 hour
- Antidote of choice - IV N-acetylcysteine (acts by replenishing hepatic glutathione)
- Alternative antidote - Methionine (less effective than NAC)

### **AMPHETAMINES**

- patient kept in dark room
- gastric lavage with tap water and activated charcoal
- sedation

### **COCAINE**

- stomach wash with potassium permanganate or tannic acid
- barbiturates or diazepam to control excitement
- cardio respiratory Stimulants and artificial respiration may be required

### **BENZODIAZEPENES**

- Activated charcoal within 1 hour of ingestion
- Maintenance of airway in those with impaired consciousness
- Flumazenil is specific benzodiazepene antagonist
- Flumazenil is however contraindicated in Mixed TCA + benzodiazepene poisoning, and those with seizures history

### **BARBITURATES**

- Gastric lavage with warm water containing potassium permanganate
- A concentrated solution of magnesium sulfate should be left in stomach
- Body warmth must be maintained
- Metaraminol - for circulatory depression and shock
- If coma is prolonged - Amphetamine sulphate 10 mg every half hour
- dialysis and exchange transfusion
- IV mannitol for forced osmotic diuresis

### **ORGANOPHOSPHATE**

- Antidote - Atropine every 15 to 30 mins till signs of atropinisation occurs (flushed face, dry mouth, dilated pupils, fast pulse, warm skin)
- Cholinesterase reactivators - oxime compounds (pralidoxime)
- Diuretic and brisk saline purgative may be useful
- Atropine reverses ACh-induced bronchospasm, bradycardia and hypotension
- Pralidoxime reactivates phosphorylated acetylcholinesterase. It reverses or prevents muscle weakness, convulsions, and coma

## **CARBON MONOXIDE**

- Remove patient from source of exposure as soon as possible
- High flow (100%) oxygen by tightly fitting facemask
- High flow oxygen should be continued until COHb is <5% and for atleast 6 hours after exposure
- Endotracheal intubation and mechanical ventilation in unconscious patients

## **ETHANOL**

- stomach lavage with sodium bicarbonate
- If hypoglycemia - isotonic saline with 5% glucose
- If increased intracranial pressure - saline purges and IV hypertonic glucose solution
- If respiratory depression - artificial respiration along with oxygen inhalation

## **METHANOL**

- gastric lavage with sodium bicarbonate in warm water
- administration of ethanol as competitive antagonist
- Antidote 4-methylpyrazole is a specific alcohol dehydrogenase inhibitor
- Folinic acid to speed up metabolism of formic acid

## **SNAKE BITE**

- Allaying anxiety and fright of patient
- Prevention of spread of venom by immobilization, application of tourniquet, cleansing the wound, and incision and suction.
- Antivenin - specific or polyvalent
- Delayed serum sickness type of response is very common with antivenin and fatal anaphylactoid reaction may occur. It should, therefore, be given if signs of systemic poisoning e.g ptosis or hemorrhagic signs develop after snake bite.
- Generally for an adult, 60 ml of polyvalent serum is injected initially, one third being given subcutaneously or locally around the bite, the other third intramuscularly, and the remaining third intravenously. The IV dose can be repeated any time, if collapse appears or every 6 hours till symptoms disappear.
- Neostigmine-atropine therapy in case of elapid bite
- Heparin along with supportive fibrinogen transfusion in case of viper bite
- When antivenin is not available, local infiltration of carbolic soap around the site of bite in case of elapid snakes and Heparin in case of vipers is recommended

## **UNIVERSAL ANTIDOTE**

- used in cases of unknown poisons
- 1 part Magnesium - neutralizes acids  
1 part tannic acid - precipitates alkaloid and many metals  
2 parts activated charcoal - absorbs alkaloid
- Mixture is taken one tbslsp mixed with 500 ml of water - soon after ingestion of poison. Repeat once or twice

