

## **POISONS SYMPTOMS**

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### **ACETAMINOPHEN**

- Initially - nausea, vomiting, right upper quadrant pain
- Later (>24 hours) - liver failure (jaundice and encephalopathy) and/or renal failure

### **AMPHETAMINES**

- Euphoria, talkativeness, restlessness, tremors
- dry mouth, nausea, vomiting, diarrhea, abdominal cramps
- Palpitations, tachycardia
- Mania and delirium with hallucinations, mainly auditory
- Severe poisoning - convulsions and coma
- Chronic poisoning - amphetamine psychosis clinically resembling acute paranoid schizophrenia

### **COCAINE**

- First acts as stimulant and then depressant of CNS
- Stimulant stage - dryness of mouth, euphoria, increased physical and mental energy, restless, excitement, delirium.
- Patient may become maniacal and may have hallucinations
- Flushed face, dilated pupils, blurred vision, tachycardia, hyperthermia, increased respiratory rate
- Toxic dose - incoordination, muscle twitching, convulsions
- Stage of depression - feeble respiration and collapse, ending in death from respiratory or cardiac failure
- Complications - MI, rhabdomyolysis, renal failure, intracerebral hemorrhage

### **Chronic cocaine poisoning**

- Black tongue and teeth
- Ulceration of nasal septum
- Anorexia, weight loss, weakness, tremors, impotence, moral deterioration, insanity
- Increased erotic tension in women and nymphomania
- Many sexual perversions in males, mainly homosexuality
- Delusions of persecution and hallucinations, chiefly tactile and visual
- Magnan's symptom - paraesthesia which feels like a constantly moving foreign body, such as fine sand or powder, under the skin.

### **BENZODIAZEPENE**

- Rapid onset weakness, ataxia, drowsiness
- Eyes - diplopia, nystagmus
- Respiratory depression - decreased respiratory rate and ventilation
- CNS depression - sedation, confusion, coma
- pupile size - normal

## **BARBITURATES**

- Giddiness, ataxia and slurred speech
- Automatism - repeatedly takes more doses because they forget the previous ones, leading to severe overdose or death
- Excitement and delirium, followed by stupor and later coma
- Advanced poisoning - cyanotic face, BP falls, temperature subnormal, Cheyne stokes breathing, absent bowel sounds
- Oliguria
- Barbiturate blisters found on sites of friction or pressure, such as interdigital clefts, axilla, and inner aspects of knees and calves

## **ORGANOPHOSPHATE**

Main toxic effects of organophosphates are muscarinic, nicotinic and on CNS

### **MUSCARINIC EFFECTS**

Mnemonic (DUMBELS)

- Diarrhea
- Urination
- Miosis
- Bronchospasm
- Emesis
- Lacrimation (red tears) - red due to porphyrin in lacrimal glands
- Salivation

### **NICOTINIC EFFECTS**

- muscle weakness
- Fasciculations
- Areflexia
- Muscle paralysis

### **EFFECTS ON CNS**

- Irritability, restlessness, apprehension
- Fine fibrillary tremors of hands, eyelids, face or tongue
- Mental confusion progressing to stupor and muscle weakness with tremors and convulsions
- Coma with absence of reflexes and depression of respiratory and circulatory centers

## **CARBON MONOXIDE**

- CO causes toxicity by binding with Hb forming carboxy-hemoglobin which reduces oxygen delivery and inhibits cellular respiration
- Initially - nausea, vomiting, ataxia, nystagmus, drowsiness, hyperventilation, hyperreflexia, shivering

- Later - coma, convulsions, hypotension, respiratory depression, and cardiovascular collapse, and ECG abnormalities such as ST depression, T wave abnormalities, ventricular tachycardia, ventricular fibrillation
- Poisoning during pregnancy - fetal hypoxia, intrauterine death

## **ETHANOL**

- Stage of excitement - feeling of well-being and pleasure, may behave in obscene manner or talk in vulgar language, sexual desire may be aroused
- Stage of incoordination - incoordination of thought, speech and action, pupils are dilated
- Stage of narcosis - passes into deep sleep, pulse is rapid, temperature subnormal, breathing stertorous, pupils contracted
- McEwan's sign
- Alcohol cause faulty depth perception, poor peripheral vision, distorted color vision, and reduced night vision
- Fine lateral Nystagmus
- Tongue dry, furred or excessive salivation
- Impaired coordination leading to impaired finger nose test
- Reflexes are delayed and sluggish

## **Chronic alcohol poisoning**

- Alcoholic dementia - gradual physical, moral and mental deterioration
- Cirrhosis of liver
- Delirium tremens - a state of excitement with hallucinations which usually lasts 3-4 days. Characterised by acute attack of insanity with symptoms of sleeplessness, marked tremors, excitement, fear and hallucinations chiefly visual and auditory.
- Korsakoff's psychosis - hallucinations, disorientation and multiple neuritis. Memory of recent events lost and he fills the gap by confabulation. This state last for about one month to a year.
- Acute hallucinosis - A state of hallucination chiefly auditory with systematized delusions of persecution lasting from weeks to months. It is a psychiatric emergency as patient may become homicidal or suicidal in response to hallucinations.

## **METHANOL**

- Headache, dizziness, nausea, vomiting
- Pain in abdomen
- Findings of intestinal contractions is diagnostic
- Marked muscular weakness and depressed cardiac action
- Dyspnea and cyanosis
- Temporary or permanent blindness
- Convulsions
- Death occurs from respiratory failure

## **SNAKE BITES**

- Poisonous snakes are elapids, vipers and sea snakes
- Elapids secrete neurotoxic venom (Cobra, king cobra common krait, banded krait, coral snake)
- Vipers secrete vasculotoxic venom. Vipers may be pit vipers (seldom fatal) or non pit vipers (dangerous)
- Sea snakes secrete myotoxic venom

#### NEUROTOXIC VENOM

- neurotoxins and cholinesterase
- slight burning at site of bite which shows a triple response
- 15 min to 2 hours later - marked neurotoxic effect  
giddiness, lethargy, muscular weakness, spreading paralysis  
salivation and vomiting  
difficulty in speaking and swallowing  
ptosis and paralysis of extraocular muscles  
breathing slow and laborous
- A few hours later  
respiration cease with or without convulsions  
heart stops  
skin and cellular tissues surrounding bite mark undergoes necrosis

#### VASCULOTOXIC VENOM

- venom include hemolysins, thromboplastin
- Locally - oozing of hemolytic blood, spreading cellulitis
- hemorrhages from external orifices
- serous and serosanguinous blisters sometimes appear
- nausea and vomiting
- collapse - cold clammy skin, rapid feeble pulse, dilated pupils insensitive to light

#### MYOTOXIC VENOM

- sharp initial prick becoming painless later
- 1-2 hrs later - generalised muscular pain and stiffness, starts in neck and limb girdle
- Myoglobinuria - characteristic brown discoloration of urine
- elevated serum transaminase
- hyperkalemia
- Respiratory failure