CANNABIS
• Psychoactive compound derived from cannabis sativa called as cannabinoid.

  - Δ-9 –THC, cannabinol and cannabidiol
  - Present in leaves, stalk, flowers and seeds

• Marijuana
  - Refers to any part of the plant or extract that is used to induce psychotomimetic or therapeutic effect.
• Active principles are fat soluble
  • stored in fat cells

• Act like time release capsule
• Single dose last for seven days
Therapeutic use

• Treatment of nausea, vomiting associated with cancer

• Antiemetic

• Reduce tremor, spasticity in patients with multiple sclerosis
Forms

• **Bhang**
  • Dried leaves and fruit shoot.
  • Contain 15% active principle

• **Majun**
  • Sweetmeat with bhang. Produce grandiose delusion.

• **Ganja**
  • Flowering top of female plant. 25% active principle.

• **Charas**
  • Resinous exudate from stem and leaves.
  • 25-40% active principle.
**Pathophysiology**

- **CB$_1$ RECEPTOR**
  - Found in brain and peripheral nerves
  - Cerebral cortex, Hippocampus, Basal ganglia, Thalamus and brain stem
  - Presynaptically it inhibit the release of Ach

- **CB$_2$ RECEPTOR**
  - Found in macrophages and other immune system
Clinical features

• Depends upon mood, personality, environment and the dose taken
• In low doses
  • Initial euphoria with
  • Over talkativeness
  • Perceptual alteration
  • This may be followed by
  • Relaxation
  • Drowsiness
  • Hypertension
  • Tachycardia
  • Slurred speech
Clinical features

• **Eyes**
  Reddening of eyes, decreased intraocular pressure

• **Lungs**
  • smoke deliver to lower respiratory tract similar to tobacco contain carcinogen

• **Mouth**
  • dryness

• **Skin**
  • Altered sensation of heat and cold

• **Heart**
  • Increase heart rate, decreased blood pressure

• **Muscle**
  • Relaxation, tingling and numbness and slurred speech
Clinical feature

• Euphoria

• Impairment of cognitive function and learning

• Slow reaction time

• Motor incoordination

• Impairment in Memory retrieval process

• Impair performance of complex task

• Hallucination

• Schizophrenia like syndrome
Clinical feature in children

• Moderate pupillary dilatation

• Drowsiness (rapid onset)

• Hypotonia

• Opisthotonic like movement

• Coma

• Presence of small dark particles in the mouth (granules, leaves, resin)
Chronic use

• Amotivational syndrome
• Hashish insanity
• Run amok
• Grandiose delusions
• Impaired attention
• Memory
• Flashbacks (perceptual, somatic, and emotional)
• Increased CoHB
• Bronchitis
• Digital clubbing
• Carcinogenesis
Diagnostic test

• Urine test
• plasma levels
  • Screening and confirmatory test
    • 11-nor-tetrahydrocannabinol-9 carboxylic acid
    • Enzyme multiplied immunoassay test
    • Radioimmunoassay
    • Gas chromatography mass spectrometry
Fatal dose and fatal period
Postmortem findings

• Usual appearance of asphyxia may be found.
Medico legal aspects
JIMSONWEED(DATURA STRAMONIUM)
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- Fruit containing seeds
- Also known as
- Thorn apple
- Devil’s apple
- Devil’s trumpet
- Loco seed
- Green dragon
  - Contain up to 500 2-3 mm kidney shaped seed
Mechanism of action

• Antimuscarinic
• Anti cholinergic
  • Toxic alkaloids

• Atropine
• Hyosyamine
• scopolamine
Toxic dose
Clinical presentation

• Dry mouth
• Difficulty in talking
• Dysphagia
• Dilatation of pupil
• Dry hot skin
• Drunken gait
• Delirium
• Drowsiness
• Corn picker’s pupil
  • Patient remain amnesic between ingestion and recovery
  • 24-48 hours
Treatment

• Gastric emptying
• Activated charcoal
• Antidote
  • Physostigmine 1-2mg I/M or I/V over 2-5 min
  • Dose may be repeated in 20-30 min
  • Watch for signs of cholinergic excess
• Diazepam
  • For agitation
  • Phenobarbital, phenothiazine, and haloperidol should not be used
• Catheterization
• sponge bath
Postmortem appearance

• Presence of dhatura seeds
• Congestion of GIT
• Asphyxial signs
Difference between Datura and chilly seed
Medico legal aspects

• Stupefying agent
• Accidental
• Add to country liquor
• Medicinal uses