OPIUM

Opium
DERIVATIVES OF OPIUM

- Dried extract of poppy plant
  - PHENANTHRENE
  - ISOQUINOLINE
• Opiate
  • Drugs extracted directly from opium
    • Morphine, codeine

• Opioids
  • Drugs with opiate like effects
    • Semi synthetic opioids (heroin, oxycodone)
    • Fully synthetic opioids (meperidine, propoxyphene)
Action of morphine

- Bind to specific receptors there is an alteration in the release of neurotransmitters from afferent nerves.
Receptors

• **µ receptors**
  • Supra spinal analgesia
  • Euphoric effects
  • Miosis
  • Respiratory depression

• **K receptors**
  • Supra spinal analgesia
  • Dysphoria

• **α receptors**
  
  CNS stimulation

• **Delta receptors**
  
  • Depression, analgesia, physical dependence
Signs and symptoms

- Stage of excitement
- Stage of stupor
- Stage of narcosis
Diagnosis

• Smell of opium (raw flesh like smell)
• Pin point immobile pupils
• Cheyne stokes breathing
• Slow respiration
• Cyanosis and froth
• Moist perspiration
• Subnormal temperature

• CLASSICAL TRIAD
  • Coma. Pin point pupils, depressed breathing
Differential diagnosis

• CVA
• Metabolic conditions
• Alcohol poisoning
• Carbolic acid poisoning
• Organophosphoruous
• Epilepsy
• Hysteria
• barbiturates
Treatment

- Gastric lavage
- Activated charcoal
- Magnesium sulphate
- I/V fluids and electrolytes
- Comatose patient must arous as quickly as possible
• Nalorphine
  • 10 mg I/V total 40 mg in 4 hours

• Naloxone
  • If patient is suspected addict
    0.1 mg naloxone I/V double every 2 min
    10-20 mg
  If not addicted then
  2mg every 2-3 mins (10-20 mg)
  Repeated doses may be necessary (30-60 mins)
  Continuous infusion can be started

• Nalmefene
  • Long acting 4-8 hours
  • 2 mg
Fatal dose
Marquis test

- Opium residue +3 ml sulphuric acid +3 drops of formalin ➔ purple red color ➔ Violet ➔ blue
Autopsy findings
- Specimen
- Bile
- Blood
- Brain
- Urine
- Liver
- Injection site with control
Medicolegal aspects

• Poison of choice for suicidal purpose
• Black color
• Rarely used for homicide
• Accidental
• Infanticide
  • Drugging of infants to keep them quiet
• Drug rule no 8
  • Mode of sale supply of drug
  • Only licensed chemist may sell opium alkaloid

• Drug rule 13
  • Medicinal opium 3 ounces
  • Opium alkaloid 60 grains

• Drug rule 14
  • Maintenance of record of dangerous drug in separate register
  • Medicinal opium
  • Morphine and preparation
  • Morphine derivatives
• District health officer can check record of dangerous drug
• All record should retained for 2 years
• It should keep under lock and key
Chronic Addiction

- Morphinomania /morphinism
• Physical degeneration
• Mental degeneration
• Moral degeneration
• Withdrawal symptoms
  • Fear, anxiety, sweating, running of eyes and nose
  • Dilated pupils
  • Goose skin
  • Twitching of muscles
  • Cramps legs/abdomen
Treatment

• Cyclazocine  4mg
• Methadone  100 mg daily
• Propanalol  80 mg
Heroin addiction

• Route of administration
  • Smoked
  • Snuff
  • Injected
  • s/c skin poppers
  • I/V main liners
Clinical features

• Anorexia, nausea, vomiting and constipation
• Formation of pigmented scars in cubital fossa, inguinal region.

RAILROAD TRACK

    Thrombosed veins
Treatment

• Methadone
• 40 mg 80 mg in chronic addicts
• 20% daily reduction in dose
• Naloxone
• Naltrexone
• Clonidine
Autopsy findings

- High risk group for transmission of hepatitis B and C, HIV and AIDS
- Body may be emaciated, dirty, showing signs of infection in the form of ulceration
- Constricted pupils
- Froth exuding from mouth and nostrils
- Injection marks
- Antecubital fossa, prominent veins of forearms or dorsum of hand
- Sclerosis of veins
- Thrombosis and scarring
- Old venous thrombosis with firm cord-like vessels under skin
• Skin popping
• s/c injection marks on thigh and abdominal walls
• Fat necrosis and abscesses
• Deeper injection into the muscles can cause chronic myositis
• Tattoo marks commonly found on inner surface of lower lip
• Histology
  • Foreign substance including talc and cotton strands may be discovered as embolic particles especially in lungs
  • Pulmonary granulomata