

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
- Organophosphorous
- Epilepsy
- Hysteria
- barbiturates

Treatment

- Gastric lavage
- Activated charcoal
- Magnesium sulphate
- I/V fluids and electrolytes
- Comatose patient must arouse 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(10-20mg)
 - Repeated doses may be necessary (30-60mins)
 - 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
- Propranolol 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 show 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