

Cocaine

Different forms of cocaine



Route of administration

- Oral

- Coca leaf, cocaine HCl

- Intranasal

- Snorting

- Intravenous

- Smoking

- Coca paste, free base, crack

Mechanism of action

- Interfere with uptake of neurotransmitter at the nerve terminals
- Block fast Na channels
- Vasoconstrictive agent
- CNS stimulation

Local anesthetic activity

- Topical anesthetic for eye ,ears, nose and throat operations
- cocaine solutions (50-100mg/ml)

Cardiovascular response

- Increase in
 - Blood pressure and heart rate
- Myocardial infarction
- Atrial fibrillation
- Supraventricular tachycardia
- Chronic
 - Dilated cardiomyopathy, diffuse ischemia

Central nervous system

- Euphoria
- Tremor
- Tactile hallucinations
- Subarachnoid hemorrhage, intracranial hemorrhage, cerebral infarction

Neurological effects

- Cocaine Washed out syndrome
 - Depressed mental status from lethargy to near coma
 - Typically after binge of stimulant use
 - Due to depletion of CNS catecholamine

Excited delirium

- Due to chronic use
- Four component
 - Hyperthermia
 - Agitated delirium
 - Respiratory arrest
 - Death

Time course for whole sequence is only 4-6 hours

hyperthermia

Psychiatric effects

- Tolerance
- Physical and physiological addiction
- Cocaine bugs
 - Magnan's sign
- stimulant abstinence syndrome
 - Crash, with drawal,extinction

Effect on eyes, nose and throat

- Persistent rhinitis, erosion and nasal perforation, sinusitis
- Crack eye
 - Corneal abrasion and ulceration

infections

- Human immunodeficiency virus (36%-58%)
- Deep venous thrombosis
- Bacterial endocarditis

Uteroplacental and perinatal effects

- Spontaneous abortion
- Abruptio placenta
- Intrauterine growth retardation
- fetal death

Teratogenic effect

- Limb reduction defect, arterial septal defect
- Cleft lip, cleft palate

Body packers and stuffers

- Body packers involves the swallowing of drug filled packets with the intent of smuggling
- Body stuffers ingest an illegal drug, urgently usually to eliminate evidence and avoid

Prosecution

Diagnostic test

- Cocaine and its metabolite can be detected
 - In nasal swab
 - serum test
 - urine
 - hairs analysis

treatment

- Decontamination

Body packers

- Activated charcoal
- whole bowel irrigation
- Laparotomy
- endoscopic retrieval for obstruction

- Diazepam 5-10mg i/v

- Oxygen

Supportive care

- Cardiovascular complication
 - Oxygen, bezodiazepine, nitroprusside, heparin
- Hyperthermia
 - Bezodiazepine, cool water, ice bath
- Pulmonary edema
 - Furosemide, morphine sulphate
- Neuropsychiatric symptoms
 - Bezodiazepine, phenobarbital
- Rhabdomyolysis
 - Hydration with isotonic crystalloid, hemodialysis