Pharma

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ملخصات

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Opioid analgestics ← عائلة الأفيون

Opiates :- Natural (Poppy plant)

Opioid :- Semi-Synthetic and Natural

Opioipeptide :- Inside the body

Classification :-
- natural
- Semi-Synthetics
- Synthetics

1- Natural :-
- Phenanthrene
  - Morphine
  - Codeine
  - Thebaine → يستخدم طبياً
- Benzylisoquinoline
  - Papaverine
  - Noscapine
  - Narcine

* Phenanthrene :- CNS effect
  - adduction
  - Spasmogenic effect

* Benzylisoquinoline (abdominal colic)

2- Semi-Synthetics :- Heroin (acetel-morphine)

3- Synthetics :-
- agonist
- Blocker
- mixed

agonist :-
- meperedin
- Methadol
- Tramadol → الأكثر أدماناً في العراق

Blocker :-
- NaloXone
- NalTreXone

X for Blocker

mixed
- Nalorphine

Morphine

- Bioavailability :- 25% only
- half-life :- 4-5 hours
- Metabolism by liver Convert to ~~inactive~~ Some to active
- excretion :- 90% renal, 10% Biliary route
- Work on opioid receptors :-
  - μ → مو → μ_1, μ_2, μ_3
  - δ → دلتا → δ_1, δ_2
  - K → كابا → K_1, K_2

  ] G-Protein Linked receptors تلزم نفس العمل

CNS

effect :- analgesia → 1- Sensory and emotional (not loss cautious) (dose dependent) (loss Pain Sensory)
2- inhibition descending inhibitory Pain central Pathway except iching because it release Histamin so increase iching
3- NA↓

euphoria
myosis → By central effect أثر مركزي لمورفين
nausea and vomiting
Vegal stimulation
Cough Centre inhibitor
Respiratory " " → may cause sudden death
ICP↑ (IntraCephalic Pressure)

CVS :- Bradycardia , Hypotension] Vegal, Histamin

Smooth muscle :- 1- Constipation (Water absorption increase)
2- B.C] Vegal, Histamin, Direct effect

Bladder contraction
close sphincter

Gallbladder
close

ulers
close

Therapeutic uses:- (S.C) (or half amount I.V) (or direct on epidural by catheter)

1- analgesia
2- acute Pulmonary edema
3- anthesia ( )
4- Atropine + Morphine for sever Colic Pain

Adverse effect :- Tolerence (may sudden death in high dose)

- Skull :- ICP ↑, Respiratory Centre
- Respiratory :- B.C
- CVS :- Hypotension, Bradycardia
- U.T :- urine returnation
- Gallbladder :- may cause Rupture
- Uterus :- Contraction & Cervix

Contraindication :-

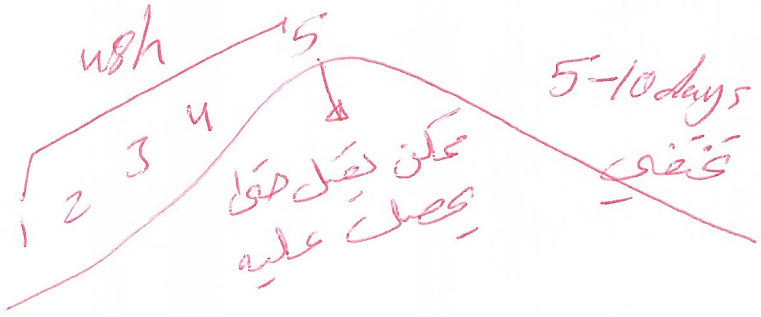
1- Head Trauma (ICP ↑) (if accident not Problem)
2- asthma
3- Hypovolemia and hypotension
4- Prostate megaly
5- Gallbladder stone
6- Hypothyroidism
7- liver failure
8- extereem old — child — old

Chronic Morphine Toxicity :- (addiction)

1- Myosis 2- behavior change

Withdrawl symtoms

1- Tachycardia
2- nerveness
3- headache
4- insuming
5- agition



Acute Morphine Toxicity :- (Respiratory Centre depression) (direct dose)

Naloxone last for 1h

↓

not for addict

Other opioid

Natural :- Codiene → Liver Convert it to Morphine

Codiene / Paracetmol

Potency : اقوى من effecacy

Morphine	Codiene
Morphine	Methyl- Morphine
Bioavail. 25%.	Bioavail :- 60%.
anaglesics Potency 100%	anaglesics Potency 8%, 10%, 20%.
uses :- anaglesics	Central Cough (anti-Tussive)

Semi-Synthetic

Heroin لا يستخدم

Synthetic

عكس تلفظ I

~~Meperidine~~ MePredine (Bethedine) (~~M~~ + S/K) (use in adverse effect Morphine)

Morphine	Bethedine
Natural	Synthetic
Bio :- 25%	Bio :- 50%
Potency :- 100%	Potency :- 10 %
Vegal stimulation	Atroptine like action
4 hours	2 hours

Metabolic of MePredine
Nor-MePredine stimulate
Serotonin Syndrom

Fentanyl, Al-fentanyl (more Potent than morphine but short duration 15-30min)
Oral 0%. (Skin Patch or epidural inj.)
(Safe for Renal failure only one in this family)

Methadone :- nearly equal to Morphine orally and less addictive and withdrawl less effect (فقط داخل مستشفيات الادمان)
(24h) (high dose cause sudden death by Arythmia not respiratory depression)

Tramadol :- (M++) (unknown of L, K) (Potency 10%)
decrease reuptake NA, serotonin mostly after orthomedic Surgery, may cause epilepsy

loperamide, diphenoxylate :- ~~CNS~~ can't cross BBB
increase [redacted] reabsorption of Water in GIT
anti-diahemia

Mixed :- (Safe) (M Cause Respiratory depression)
Nalbuphine (Nubain) (K+) (Spinal analgesia)
Trade name
don't use to treat addicts

Opioid Blockers :-
NaloXone (Parienteal only) → for 1- acute opioid toxicity
NalTreXone (ush) (orally) 2- labour if take opioid