

ANTIEMETICS.

① Anticholinergics.

MOA: Blocks M_1 receptors of vomiting center & CTZ
x cond: of nerve impulses from vestibular apparatus to vomiting center

use: motion sickness.

A/E: sedation, dry mouth, constipation, . . .

HYOSCINE - D.O.C motion sickness.
transdermal patch. (3 days)

SCOPOLAMINE - prophylaxis of morning sickness,
motion sickness

② H_1 antihistamines.

MOA: Blocks H_1 receptor; x stimulation of VC
+ anticholinergic property.

A/E: sedation.

uses: CYCLIZINE, MECLIZINE - Sea sickness.

DOXYLAMINE + PYRIDOXINE - Morning sickness.

CINNARIZINE - vertigo.

Promethazine, diphenhydramine, dimenhydrinate
- chemotherapy induced nausea and vomiting.

③ Neuroleptics

MOA: D₂ receptors X PD CTZ.

+ antimuscarinic + M₁ antihistaminic property

- uses:
- Drug induced & post operative N/V.
 - Disease induced V.
 - Malignant & chemo induced V.
 - Radiation sickness V.
 - Motion sickness (only in hyperemesis gravidarum).

Prochlorperazine — vertigo.

s/c: sedation, a/c muscle dystonia, extrapyramidal side effects.

④ Prokinetics (gastro moving agents)

METOCLOPRAMIDE.

~~Act~~ Action → ↑ gastric peristalsis, relaxes pylorus & 1st pt of duodenum.
↑ LES tone & opposes GE reflex.

MOA: D₂ antagonism (↑ gastric relaxation, LES relax, N/V) → D₂.
5HT₄ agonism (ACh release ↑).
5HT₃ antagonism.

PK: oral abs crosses BBB & placenta.
short acting t_{1/2} → 3-6 hours.

DI
Mechanism therapeutic effect of levodopa
+ absorption of dopamine NOT in action or memory

A/E: sedation, dizziness, loose stools,
extrapyramidal side effects, parkinsonism, gabutche,
syncope, muscle dystonia.

uses: Antidromic
gastrointestinal (emergency GA, postvagotomy or cholelithiasis)
dyspepsia.
GERD

DOMPERIDONE

No action on 5HT₃ or 4.

Blocks D₂
poorly crosses BBB
lower efficacy than metoclopramide
longer acting plasma t_{1/2} - 7.5 hours.
CTZ action mainly.

Does not block effects of levodopa.
lower S/E & better tolerated.
extrapyramidal S/E rare (except hyperprolactinemia)

PK absorbed orally, BA 15% (FPM)
excreted in urine.

A/E → dry mouth, loose stools, headache,
nausea etc.

uses: Antiemetic, prokinetic, dyspepsia, GERD

CISAPRIDE & MOSAPRIDE

- less antiemetic activity.
- lacks D_2 receptor antagonism.
- Action $\rightarrow$ 5HT₄ agonism.
- Gastric emptying $\uparrow$, LES tone $\uparrow$, oesophageal peristalsis $\uparrow$.
- restores $\uparrow$ gastrointestinal motility.

use: Nonulcer dyspepsia.
idiopathic gastroparesis.
GERD.
I/c constipation.

AG: Cisapride + CYP3A4 inhibitor.
 $\rightarrow$ ventricular fibrillation.

ITOPRIDE

D_2 + anti-~~CAC~~ ppty.

LEVOSULPRIDE

central + peripheral D_2 block.

atypical antipsychotic, prokinetic, antiemetic.

use: dyspepsia, N, bloating, GERD, IBS.

EMITAPRIDE

5HT₂ + D_2 block, 5HT₄ stimulation;
myenteric plexus.

⑤ 5-HT₃ antagonists

MOA: blocks 5HT₃ receptors on vagal efferents
in GIT as well as NTS and CTZ.

- blocks emetogenic impulses at peripheral origin
- in GIT and at central relay
- highly effective antiemetic actions

uses:

chemotherapy induced N & V. → chemo cause
post operative " release of
post radiation " serotonin from
small intestine.

4/e: Headache, dizziness, constipation &
abdominal discomfort, QT prolongation, requires
dose reduction in hepatic insufficiency

⑥ NK₁ receptor antagonists

APREPITANT:

- high affinity NK₁ receptor antagonist
- blocks emetic action of substance P with
little effect on 5HT₃, D₂ or other receptors

use: CINV

oral aprepitant + IV ondansetron + Dexamethasone
(90% efficacy)

FOsaprepitant - parenteral

⑦ Adjuvant antiemetics

- corticosteroids - chemo, augmented
- canabinoids - CB₁ receptors
- Benzodiazepines - relieve psychogenic
component

Motion Sickness

Anticholinergics : Hyoscine, Dicyclanide.
Antihistamines - Cyclizine, Mefenazine.

take $\frac{1}{2}$ - 1 hour before journey.

Morning sickness

→ seasickness, dietary adjustment

Dicyclanide.

Promethazine.

Doxylamine + pyridoxine.

Metoprolol.

take @ bedtime.

Vertigo

① Labyrinthine suppressants.

- Antihistamines.

Anticholinergics.

Neuroleptics.

② Vasodilators - (↑ BF to ear).

③ Diuretics - (↓ fluid pressure).

④ Antidopaminergics, antidepressants (modify sensation).

⑤ Corticosteroids - (↓ labyrinthine edema).