



SNS COLLEGE OF ALLIED HEALTH SCIENCES

SNS Kalvi Nagar, Coimbatore - 35

Affiliated to Dr MGR Medical University, Chennai



DEPARTMENT : PHYSICIAN ASSISTANT

COURSE NAME : PHARMACOLOGY

UNIT : DRUGS ACTING ON GASTROINTESTINAL SYSTEM

TOPIC : H2 BLOCKERS



H2 BLOCKERS



- H2 blockers, also known as H2 receptor antagonists, are a class of medications that inhibit the action of histamine on the H2 receptors in the stomach lining.
- By blocking these receptors, H2 blockers reduce the production of stomach acid.



CIMETIDINE



Class:

H₂ receptor antagonist.

Mechanism of Action:

Blocks histamine H₂ receptors on the gastric parietal cells, inhibiting the secretion of gastric acid.



Pharmacodynamics:

Reduces both basal and stimulated gastric acid secretion.

Pharmacokinetics:

Well-absorbed orally, undergoes significant hepatic metabolism, and excreted in urine.



Indications:

Treatment of peptic ulcers, gastroesophageal reflux disease (GERD), and Zollinger-Ellison syndrome.

Contraindications:

Known hypersensitivity, use with certain drugs (like warfarin, theophylline).



Side Effects:

Gynecomastia (enlarged breasts in males), confusion, drug interactions due to CYP450 inhibition.



RANITIDINE



Class:

H₂ receptor antagonist.

Mechanism of Action:

Blocks histamine H₂ receptors, leading to decreased gastric acid secretion.



Pharmacodynamics:

Reduces both basal and stimulated gastric acid secretion.

Pharmacokinetics:

Well-absorbed orally, undergoes hepatic metabolism, and excreted in urine.



Indications:

Treatment of peptic ulcers, GERD, and conditions where reduction of gastric acid secretion is beneficial.

Contraindications:

Hypersensitivity.



Side Effects:

Rare but may include headache, constipation, diarrhea.



FAMOTIDINE



Class:

H₂ receptor antagonist.

Mechanism of Action:

Blocks histamine H₂ receptors, resulting in reduced gastric acid secretion.



Pharmacodynamics:

Reduces both basal and stimulated gastric acid secretion.

Pharmacokinetics:

Well-absorbed orally, undergoes hepatic metabolism, and excreted in urine.



Indications:

Peptic ulcers, GERD, and conditions associated with hypersecretion of gastric acid.

Contraindications:

Hypersensitivity.



Side Effects:

Generally well-tolerated; rare side effects may include headache, constipation, diarrhea.



TECHNICIAN ROLE



- Liver function tests, especially with long-term use.



ASSESSMENT



- What is the Pharmacodynamics of Cimetidine ?
- What all are the Side effects of Famotidine ?