Cimetidine and Famotidine (H2 Receptor Blockers)

The drugs cimetidine and famotidine are histamine 2 receptor antagonists, which is a class of drugs used to prevent or treat peptic ulcer disease. Generally, these drugs are indicated for managing gastric and duodenal ulcers. H2 receptor antagonists function by blocking the H2 receptors responsible for stimulating the secretion of gastric acid. Drugs in this class end with the suffix “tidine” and can cause side effects involving the central nervous system, the function of androgen receptors, and may also cause pneumonia.



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-tidine Suffix
Teddies
Drugs in this class end with the suffix “tidine” and include cimetidine and famotidine

Mechanism

H2 Receptor Blocker
Block-guy blocking H(2) Tutu Receptor
H2 receptors stimulate the secretion of gastric acid. H2 receptor antagonists block this action and result in decreased production of gastric acid.

Indications

Suppress Gastric Acid Secretion
Suppresses Stomach and Acidic-lemon Secretion
H2 receptor antagonists bind and suppress the secretion of acid by parietal cells. Additionally, the activity of acetylcholine and gastrin, the two major preceptors to the production of acid are also reduced.

Side Effects (All)

Pneumonia
Nude-mona
H2 receptor antagonists can elicit the development of pneumonia by increasing the pH of the stomach, making it more basic. When the pH is increased, bacteria are able to colonize the stomach and may migrate up to the respiratory tract.

Side Effects - Cimetidine

Anti-androgen Effects
Ant-tie and Android-genie
Cimetidine can produce antiandrogenic effects by binding to the androgen receptors and blocking the function of androgen receptors. This blockade can cause decreased libido, impotence, and gynecomastia. These effects are reversible once the drug is stopped.

CNS Changes
CNS Delta
Cimetidine can result in CNS changes, therefore it should be used with caution, especially with elderly patients who have pre-existing liver or kidney dysfunction. Side effects involving the CNS are more prominent in this population. These side effects include hallucinations, confusion, and CNS depression or excitation.

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