Chapter-2

Antiulcer Agents

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ABSTRACT

Antiulcer agents are essential medications used to manage and treat conditions like peptic ulcers, gastroesophageal reflux disease (GERD), and other acid-related disorders of the gastrointestinal tract. These agents are classified into several categories based on their mechanisms of action: proton pump inhibitors (PPIs), H2-receptor antagonists (H2RAs), antacids, mucosal protective agents, antibiotics, and prostaglandin analogues. PPIs, such as omeprazole and lansoprazole, work by irreversibly inhibiting the hydrogen-potassium ATPase enzyme, significantly reducing gastric acid secretion. H2RAs, including ranitidine and famotidine, competitively inhibit histamine at H2 receptors, decreasing acid production. Antacids like magnesium hydroxide and calcium carbonate neutralize stomach acid, providing rapid symptomatic relief. Mucosal protective agents, such as sucralfate and bismuth subsalicylate, protect the gastric lining by forming a barrier or coating ulcers. Antibiotics like clarithromycin and amoxicillin are used in combination regimens to eradicate Helicobacter pylori, a common cause of peptic ulcers. Prostaglandin analogues, like misoprostol, enhance mucosal defenses by increasing mucus and bicarbonate secretion. Each of these agents has specific therapeutic uses and potential side effects, making them integral to the effective management of acid-related gastrointestinal conditions.

Introduction

Antiulcer agents are medications used to treat and manage ulcers in the stomach and duodenum, as well as other gastrointestinal disorders associated with excessive gastric acid production. These agents help to reduce gastric acidity, protect the mucosal lining, and promote healing of the ulcerated tissue.

Classification of Antiulcer Agents

1. Proton Pump Inhibitors (PPIs)
2. H2-Receptor Antagonists (H2RAs)
3. Antacids
4. Mucosal Protective Agents
5. Antibiotics
6. Prostaglandin Analogues

Pharmacology of Antiulcer Agents

1. *Proton Pump Inhibitors (PPIs)*

Examples: Omeprazole, Lansoprazole, Pantoprazole, Esomeprazole

Mechanism of Action: PPIs irreversibly inhibit the hydrogen-potassium ATPase enzyme (proton pump) in the parietal cells of the stomach, leading to a significant reduction in gastric acid secretion. By blocking the final step in acid production, PPIs are highly effective in reducing both basal and stimulated gastric acid output.

Uses: Treatment of gastroesophageal reflux disease (GERD), peptic ulcer disease, Zollinger-Ellison syndrome, and eradication of Helicobacter pylori in combination with antibiotics.

Side Effects: Headache, gastrointestinal disturbances (nausea, diarrhea, abdominal pain), long-term use may be associated with increased risk of fractures, vitamin B12 deficiency, and potential renal issues.

2. *H2-Receptor Antagonists (H2RAs)*

Examples: Ranitidine, Famotidine, Cimetidine, Nizatidine

Mechanism of Action: H2RAs competitively inhibit the binding of histamine to H2 receptors on the parietal cells in the stomach, thereby reducing gastric acid secretion. They primarily reduce basal and nocturnal acid production.

Uses: Treatment of GERD, peptic ulcer disease, and prevention of stress ulcers.

Side Effects: Headache, dizziness, constipation or diarrhea, and in rare cases, mental confusion (more common in elderly patients). Cimetidine, in particular, can inhibit cytochrome P450 enzymes, leading to drug interactions.

3. *Antacids*

Examples: Aluminum hydroxide, Magnesium hydroxide, Calcium carbonate, Sodium bicarbonate

Mechanism of Action: Antacids neutralize stomach acid by increasing the pH of the gastric contents. They provide symptomatic relief of acid-related discomfort by buffering the acid.

Uses: Rapid relief of heartburn, indigestion, and mild cases of GERD.

Side Effects: Constipation (aluminum-containing antacids), diarrhea (magnesium-containing antacids), and potential metabolic alkalosis with excessive use (sodium bicarbonate).

4. *Mucosal Protective Agents*

Examples: Sucralfate, Bismuth subsalicylate, Misoprostol

Mechanism of Action

- **Sucralfate:** Forms a protective barrier by adhering to the ulcer site, shielding it from acid and pepsin.
- **Bismuth subsalicylate:** Coats ulcers and erosions, has antimicrobial action against H. pylori, and anti-inflammatory properties.

- **Misoprostol:** A prostaglandin E1 analogue that increases the production of protective mucus and bicarbonate, and enhances mucosal blood flow.

Uses: Treatment and prevention of peptic ulcers, particularly in patients taking NSAIDs (misoprostol), and as part of H. pylori eradication regimens (bismuth subsalicylate).

Side Effects: Constipation (sucralfate), black stools and tongue (bismuth subsalicylate), diarrhea and uterine contractions (misoprostol).

5. ***Antibiotics***

Examples: Clarithromycin, Amoxicillin, Metronidazole, Tetracycline

Mechanism of Action: These antibiotics are used in combination to eradicate H. pylori infection, which is a major cause of peptic ulcers. Each antibiotic targets the bacterium in a different way to ensure complete eradication and prevent resistance.

Uses: Part of combination therapy for H. pylori-associated peptic ulcer disease.

Side Effects: Gastrointestinal disturbances (nausea, diarrhea), antibiotic resistance, and specific side effects related to individual antibiotics (e.g., metallic taste with metronidazole).

6. ***Prostaglandin Analogues***

Example: Misoprostol

Mechanism of Action: As mentioned earlier, misoprostol is a synthetic prostaglandin E1 analogue that mimics the protective effects of endogenous prostaglandins. It increases mucus and bicarbonate secretion and enhances mucosal blood flow, providing a protective effect on the gastric lining.

Uses: Prevention of NSAID-induced gastric ulcers, particularly in patients at high risk of complications.

Side Effects: Diarrhea, abdominal pain, uterine contractions (contraindicated in pregnancy).

Omeprazole (Prilosec)

1. **Mechanism of Action:** Omeprazole irreversibly inhibits the H+/K+ ATPase proton pump in the stomach's parietal cells. This action decreases the secretion of gastric acid, leading to reduced acidity in the stomach.

2. **Absorption:** Omeprazole is usually taken orally and is rapidly absorbed from the gastrointestinal tract. Its absorption is optimized when taken on an empty stomach.

3. **Metabolism:** Omeprazole is extensively metabolized in the liver by the cytochrome P450 enzyme system, primarily CYP2C19 and CYP3A4.

4. **Active Metabolite:** Omeprazole undergoes hepatic metabolism to form an active metabolite, 5-hydroxyomeprazole. This metabolite is responsible for the inhibition of the proton pump and is considered the pharmacologically active form.

5. **Duration of Action:** Omeprazole has a relatively long duration of action, and its effects can last for up to 24 hours.

6. **Therapeutic Uses:** Omeprazole is used to treat various conditions associated with excessive stomach acid, including GERD, peptic ulcers, Zollinger-Ellison syndrome, and as part of H. pylori eradication therapy in combination with antibiotics.

Esomeprazole (Nexium)

1. **Mechanism of Action:** Esomeprazole is the S-isomer of omeprazole, and it also inhibits the H+/K+ ATPase proton pump in the stomach's parietal cells. Like omeprazole, it reduces gastric acid secretion.

2. **Absorption:** Esomeprazole is well-absorbed when taken orally, and it is available in both delayed-release capsules and intravenous formulations.

3. **Metabolism:** Esomeprazole is metabolized in the liver, primarily by the enzyme CYP2C19.

4. **Active Metabolite:** Esomeprazole has the same active metabolite, 5-hydroxyomeprazole, as omeprazole. However, esomeprazole may have a slightly higher systemic exposure compared to omeprazole.

5. **Duration of Action:** Esomeprazole, like omeprazole, has a relatively long duration of action and is typically dosed once daily.

6. **Therapeutic Uses:** Esomeprazole is used for the same indications as omeprazole, including the treatment of GERD, peptic ulcers, Zollinger-Ellison syndrome, and H. pylori eradication therapy.

Lansoprazole (Prevacid)

1. **Mechanism of Action:** Lansoprazole inhibits the H+/K+ ATPase proton pump in the stomach's parietal cells. By doing so, it decreases the secretion of gastric acid, leading to reduced acidity in the stomach.

2. **Absorption:** Lansoprazole is taken orally and is well-absorbed from the gastrointestinal tract. It is more stable in acidic conditions than omeprazole, which can be an advantage in some clinical situations.

3. **Metabolism:** Lansoprazole is metabolized in the liver, primarily by the enzyme CYP2C19, similar to Omeprazole.

4. **Active Metabolite:** Lansoprazole has an active metabolite, 5-hydroxylansoprazole, which is responsible for inhibiting the proton pump and is considered the pharmacologically active form.

5. **Duration of Action:** Lansoprazole has a relatively long duration of action, with its effects lasting up to 24 hours.

6. **Therapeutic Uses:** Lansoprazole is used to treat various conditions associated with excessive stomach acid, including gastroesophageal reflux disease (GERD), peptic ulcers, Zollinger-Ellison syndrome, and H. pylori eradication therapy in combination with antibiotics.

Pantoprazole (Protonix)

1. **Mechanism of Action:** Pantoprazole inhibits the H+/K+ ATPase proton pump in the parietal cells of the stomach, leading to decreased gastric acid production.

2. **Absorption:** Pantoprazole is taken orally and is absorbed from the gastrointestinal tract. It is available in both delayed-release tablet and intravenous formulations.

3. **Metabolism:** Pantoprazole is metabolized in the liver, primarily by the enzyme CYP2C19, similar to Omeprazole and Lansoprazole.

4. **Active Metabolite:** Unlike some other PPIs, Pantoprazole does not have an active metabolite. It acts directly as a prodrug in its active form.

5. **Duration of Action:** Pantoprazole has a relatively long duration of action and is typically dosed once daily.

6. **Therapeutic Uses:** Pantoprazole is used to treat conditions similar to other PPIs, such as GERD, peptic ulcers, Zollinger-Ellison syndrome, and H. pylori eradication therapy when used in combination with antibiotics.

Famotidine (Pepcid)

1. **Mechanism of Action:** Famotidine competitively inhibits histamine-2 receptors (H2 receptors) in the stomach's parietal cells. By doing so, it reduces the stimulation of these cells, leading to a decrease in the production of gastric acid.

2. **Absorption:** Famotidine is well-absorbed when taken orally, and it is available in both over-the-counter and prescription strengths.

3. **Metabolism:** Famotidine undergoes hepatic metabolism, mainly through oxidation, but it has a relatively low potential for drug interactions compared to some other medications.

4. **Duration of Action:** Famotidine has a relatively short duration of action compared to proton pump inhibitors (PPIs) like Omeprazole or Lansoprazole, requiring more frequent dosing for sustained acid suppression.

5. **Therapeutic Uses:** Famotidine is used for the short-term treatment and prevention of conditions associated with excessive stomach acid, including heartburn, indigestion, and certain gastrointestinal disorders like gastroesophageal reflux disease (GERD).

Ranitidine (Zantac)

1. **Mechanism of Action:** Ranitidine also inhibits H2 receptors in the stomach's parietal cells. Like Famotidine, it reduces the stimulation of these cells and decreases gastric acid production.

2. **Absorption:** Ranitidine is well-absorbed when taken orally, and it is available in various formulations, including tablets, effervescent tablets, and syrup.

3. **Metabolism:** Ranitidine is metabolized in the liver, primarily through oxidation and conjugation with glucuronic acid.

4. **Duration of Action:** Ranitidine has a relatively short duration of action and requires more frequent dosing compared to PPIs, with most people taking it two times a day.

5. **Therapeutic Uses:** Ranitidine is used for the treatment and prevention of conditions associated with excess stomach acid, including peptic ulcers, GERD, and Zollinger-Ellison syndrome.

Cimetidine (Tagamet)

1. **Mechanism of Action:** Cimetidine competitively inhibits H2 receptors in the stomach's parietal cells. By doing so, it decreases the stimulation of these cells, leading to a reduction in the production of gastric acid.

2. **Absorption:** Cimetidine is well-absorbed when taken orally. It is available in various formulations, including tablets and liquid forms.

3. **Metabolism:** Cimetidine is extensively metabolized in the liver, primarily through the cytochrome P450 enzyme system, with a notable impact on CYP2D6 and CYP3A4 enzymes. This can lead to significant drug interactions.

4. **Duration of Action:** Cimetidine has a relatively short duration of action, which requires more frequent dosing for sustained acid suppression, typically three to four times a day.

5. **Therapeutic Uses:** Cimetidine is used to treat conditions associated with excess stomach acid, including peptic ulcers, gastroesophageal reflux disease (GERD), and Zollinger-Ellison syndrome. It can also be used for the prevention and treatment of stress ulcers in critically ill patients.

Nizatidine (Axid)

1. **Mechanism of Action**: Nizatidine, like Cimetidine, is an H2 receptor antagonist. It inhibits H2 receptors in the stomach's parietal cells, leading to reduced gastric acid production.

2. **Absorption:** Nizatidine is well-absorbed when taken orally, and it is available in tablet and liquid forms.

3. **Metabolism:** Nizatidine is metabolized in the liver, but it has less potential for drug interactions compared to Cimetidine, as it has a more favorable profile regarding its effect on the cytochrome P450 enzyme system.

4. **Duration of Action:** Nizatidine has a relatively short duration of action, requiring more frequent dosing for sustained acid suppression, typically two times a day.

5. **Therapeutic Uses:** Nizatidine is used for the treatment of conditions associated with excessive stomach acid, including peptic ulcers, GERD, and heartburn.

Aluminum Hydroxide (Amphojel)

1. **Mechanism of Action:** Aluminum hydroxide is an antacid that acts by neutralizing stomach acid through the formation of aluminum salts. It reacts with hydrochloric acid (HCl) in the stomach to produce aluminum chloride and water, thereby raising the pH in the stomach.

2. **Absorption:** Aluminum ions from aluminum hydroxide are not significantly absorbed from the gastrointestinal tract into the bloodstream. This makes it a relatively safe choice as an antacid, as systemic absorption is minimal.

3. **Onset of Action:** The onset of action is relatively slow, taking about 30 minutes to 2 hours to provide relief.

4. **Duration of Action:** The duration of action is relatively prolonged, and the effects can last for several hours.

5. **Potential Side Effects:** Chronic use of aluminum-containing antacids can lead to aluminum accumulation in the body, which may be harmful in individuals with impaired kidney function. This can lead to conditions like aluminum-induced osteomalacia and encephalopathy. Therefore, aluminum-containing antacids should be used with caution, especially in those with kidney disease

Magnesium Hydroxide (Milk of Magnesia)

1. **Mechanism of Action:** Magnesium hydroxide is another antacid that neutralizes stomach acid. It reacts with hydrochloric acid in the stomach to form magnesium chloride and water, raising the pH in the stomach.

2. **Absorption:** Unlike aluminum hydroxide, magnesium ions can be absorbed to some extent from the gastrointestinal tract into the bloodstream. This can lead to magnesium excess in the body, particularly in individuals with impaired kidney function.

3. **Onset of Action:** The onset of action is relatively rapid, usually within 30 minutes to 1 hour.

4. **Duration of Action:** The duration of action is moderate, and relief from symptoms can last for a few hours.

5. **Potential Side Effects:** Magnesium-containing antacids can lead to diarrhea and, in individuals with impaired kidney function, hypermagnesemia (excess magnesium in the blood). In severe cases, hypermagnesemia can be life-threatening.

Calcium Carbonate (Tums)

1. **Mechanism of Action:** Calcium carbonate is an antacid that works by directly neutralizing stomach acid through a chemical reaction. It reacts with hydrochloric acid

(HCl) in the stomach to form calcium chloride, carbon dioxide, and water, raising the pH in the stomach.

2. **Absorption:** Calcium from calcium carbonate can be absorbed in the gastrointestinal tract, which can be both a benefit and a potential drawback. The absorbed calcium can contribute to the body's calcium levels, which may be useful for individuals with calcium deficiencies.

3. **Onset of Action:** The onset of action is relatively rapid, usually within a few minutes to half an hour.

4. **Duration of Action:** The duration of action is moderate, and relief from symptoms can last for a few hours.

5. **Potential Side Effects:** Chronic use of calcium-containing antacids like Tums can lead to excessive calcium intake, which may have adverse effects on calcium metabolism and potentially contribute to conditions like kidney stones.

Sodium Bicarbonate (Baking Soda)

1. **Mechanism of Action:** Sodium bicarbonate is an antacid that neutralizes stomach acid through a chemical reaction. It reacts with hydrochloric acid (HCl) in the stomach to form sodium chloride, carbon dioxide, and water, raising the pH in the stomach.

2. **Absorption:** Sodium bicarbonate is rapidly absorbed from the gastrointestinal tract, leading to an increase in systemic sodium levels. This can be a potential concern for individuals who need to restrict their sodium intake, such as those with hypertension or heart conditions.

3. **Onset of Action:** The onset of action is relatively rapid, usually within a few minutes.

4. **Duration of Action:** The duration of action is moderate, providing relief for a few hours.

5. **Potential Side Effects:** Excessive use of sodium bicarbonate can result in systemic alkalosis, leading to symptoms such as muscle twitching, hand tremors, and cognitive changes. In individuals with certain medical conditions, excessive sodium intake can worsen health issues, so it should be used with caution.

Sucralfate (Carafate)

1. **Mechanism of Action:** Sucralfate is a mucosal protective agent. It does not directly neutralize stomach acid but acts by forming a protective barrier over the ulcer or damaged mucosal lining in the stomach and duodenum. This barrier adheres to the ulcer site, providing a physical barrier that shields the tissue from stomach acid and other irritants.

2. **Absorption:** Sucralfate is not significantly absorbed from the gastrointestinal tract. It acts locally within the stomach and duodenum.

3. **Onset of Action:** The onset of action is relatively slow, as it requires time to bind to the damaged mucosal surface. Therefore, it may not provide immediate relief of symptoms.

4. **Duration of Action:** Sucralfate's protective barrier can last for several hours, which allows for extended protection of the ulcer site.

5. **Therapeutic Uses:** Sucralfate is used to treat and promote healing of peptic ulcers, including duodenal ulcers and gastric ulcers. It is also used to manage gastroesophageal reflux disease (GERD) and protect against further damage from stomach acid.

Misoprostol (Cytotec)

1. **Mechanism of Action:** Misoprostol is a synthetic prostaglandin analogue. It acts by stimulating the production of mucus in the stomach lining, which enhances the protective mucus layer and increases bicarbonate secretion. This helps to reduce the risk of stomach ulcers by maintaining the mucosal barrier and decreasing the effects of gastric acid.

2. **Absorption:** Misoprostol is absorbed from the gastrointestinal tract and can have systemic effects, which may contribute to its therapeutic and side effects.

3. **Onset of Action:** The onset of action is relatively quick, with effects typically seen within an hour or so after administration.

4. **Duration of Action:** Misoprostol's effects on mucus production and bicarbonate secretion can last for several hours.

5. **Therapeutic Uses**: Misoprostol is used for the prevention and treatment of nonsteroidal anti-inflammatory drug (NSAID)-induced gastric ulcers. It is also used to induce labor and for medical abortion in some cases.

Clarithromycin

1. **Mechanism of Action:** Clarithromycin is a macrolide antibiotic. It works by inhibiting bacterial protein synthesis. Specifically, it binds to the 50S ribosomal subunit of bacteria and interferes with the translation process, thus preventing the synthesis of new proteins and inhibiting bacterial growth.

2. **Spectrum of Activity:** Clarithromycin is effective against a wide range of Gram-positive and Gram-negative bacteria. It is commonly used to treat respiratory tract infections, skin and soft tissue infections, and some gastrointestinal infections. Additionally, it is effective against certain atypical pathogens like Mycoplasma pneumoniae and Chlamydia pneumoniae.

3. **Absorption and Distribution:** Clarithromycin is well-absorbed when taken orally and achieves good tissue penetration. It can reach high concentrations in the lungs, making it suitable for the treatment of respiratory infections.

4. **Metabolism and Excretion:** Clarithromycin is metabolized in the liver, primarily through the cytochrome P450 enzyme system, particularly CYP3A4. It is excreted in both the urine and feces.

5. **Potential Side Effects:** Common side effects of Clarithromycin can include gastrointestinal symptoms, such as nausea and diarrhea. It may also interact with other medications that are metabolized by CYP3A4, potentially leading to drug interactions.

Amoxicillin

1. **Mechanism of Action:** Amoxicillin is a penicillin-type antibiotic. It works by interfering with bacterial cell wall synthesis. Specifically, it inhibits the enzymes involved in cross-linking peptidoglycans, which are essential components of the bacterial cell wall. This results in weakened cell walls and ultimately leads to bacterial cell lysis.

2. **Spectrum of Activity:** Amoxicillin is effective against a wide range of Gram-positive and some Gram-negative bacteria. It is commonly used to treat respiratory tract infections, urinary tract infections, skin and soft tissue infections, and other bacterial infections. It is often used in combination with other antibiotics to treat more severe infections.

3. **Absorption and Distribution:** Amoxicillin is well-absorbed when taken orally and reaches high concentrations in many body tissues and fluids, making it effective for various types of infections.

4. **Metabolism and Excretion:** Amoxicillin is excreted primarily through the kidneys, and its elimination is largely unchanged in the urine. This is why it is often dosed multiple times a day to maintain therapeutic levels.

5. **Potential Side Effects:** Common side effects of Amoxicillin may include gastrointestinal symptoms like nausea, vomiting, and diarrhea. In some cases, individuals may experience allergic reactions, such as skin rashes or more severe hypersensitivity reactions.

Metronidazole

1. **Mechanism of Action:** Metronidazole is an antibiotic with a unique mechanism of action. It is effective against anaerobic bacteria and certain parasites. Inside bacterial and protozoal cells, it undergoes chemical reduction and forms unstable intermediates that disrupt DNA structure and inhibit nucleic acid synthesis. This leads to bacterial cell death.

2. **Spectrum of Activity:** Metronidazole is particularly effective against anaerobic bacteria, making it useful for treating infections in environments with low oxygen levels. It is commonly used to treat infections in the gastrointestinal tract, gynecological infections, and parasitic infections, such as amebiasis and giardiasis.

3. **Absorption and Distribution:** Metronidazole is well-absorbed when taken orally or administered intravenously. It can penetrate various tissues and body fluids, including the central nervous system.

4. **Metabolism and Excretion:** Metronidazole is primarily metabolized in the liver and excreted in the urine.

5. **Potential Side Effects:** Common side effects of Metronidazole can include gastrointestinal symptoms like nausea and diarrhea. Prolonged use of Metronidazole can lead to peripheral neuropathy. It should not be taken with alcohol, as it can cause a disulfiram-like reaction with symptoms like nausea, vomiting, and headache.

Tetracycline

1. **Mechanism of Action:** Tetracycline is a broad-spectrum antibiotic that works by inhibiting bacterial protein synthesis. It does so by binding to the 30S ribosomal subunit, preventing the attachment of aminoacyl-tRNA to the mRNA-ribosome complex. This ultimately leads to the inhibition of protein production and bacterial growth.

2. **Spectrum of Activity:** Tetracycline is effective against a wide range of Gram-positive and Gram-negative bacteria. It is commonly used to treat respiratory tract infections, skin and soft tissue infections, and other bacterial infections. It is also used for the treatment of certain atypical pathogens like Mycoplasma pneumoniae and Chlamydia trachomatis.

3. **Absorption and Distribution:** Tetracycline is well-absorbed when taken orally, but its absorption can be affected by the presence of food, calcium, and antacids. It can penetrate many body tissues, including the respiratory tract, urinary tract, and skin.

4. **Metabolism and Excretion:** Tetracycline is primarily excreted in the urine and, to a lesser extent, in the bile.

5. **Potential Side Effects:** Common side effects of Tetracycline may include gastrointestinal symptoms, such as nausea, vomiting, and diarrhea. Prolonged use of Tetracycline can result in tooth discoloration, especially in children. It can also make the skin more sensitive to sunlight (photosensitivity), leading to sunburn.

Rebamipide

1. **Mechanism of Action:** Rebamipide is a mucosal protective agent. It exerts its effects by enhancing the production of mucus, bicarbonate, and prostaglandins in the stomach and small intestine. These actions help protect and promote the healing of the mucosal lining, making it more resistant to injury from factors like stomach acid and other irritants.

2. **Therapeutic Uses:** Rebamipide is primarily used to treat gastrointestinal conditions, such as peptic ulcers, gastritis, and gastroesophageal reflux disease (GERD). It is particularly useful for the treatment of mucosal damage caused by nonsteroidal anti-inflammatory drugs (NSAIDs) and Helicobacter pylori infection.

3. **Absorption and Distribution:** Rebamipide is well-absorbed when taken orally and undergoes rapid absorption and distribution to the gastrointestinal mucosa, where it exerts its protective effects.

4. **Metabolism and Excretion:** Rebamipide is metabolized in the liver and excreted in the urine.

5. **Potential Side Effects:** Common side effects of Rebamipide may include gastrointestinal symptoms like diarrhea and nausea.