



SNS COLLEGE OF ALLIED HEALTH SCIENCES

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**DEPARTMENT : OPERATION THEATRE AND ANAESTHESIA
TECHNOLOGY**

COURSE NAME : PHARMACOLOGY

UNIT : ANTACIDS

TOPICS : NA CITRATE, GELUSIL, MUCAINE GEL



ANTACIDS



- Antacids are medications that are used to neutralize excess stomach acid, providing relief from symptoms associated with conditions such as heartburn, indigestion, and acid reflux.
- Stomach acid, which is primarily composed of hydrochloric acid, is essential for the digestion of food.



NA CITRATE



Class:

Alkalinizing agent, systemic antacid.

Mechanism of Action:

Sodium citrate is converted to bicarbonate in the body, which acts as a buffer, neutralizing excess gastric acid. It can also increase gastric pH.



Pharmacodynamics:

Bicarbonate ions react with hydrogen ions to form water and carbon dioxide, reducing acidity.

Pharmacokinetics:

Absorbed and metabolized in the body, with sodium bicarbonate as the active form.



Indications:

Relief of symptoms associated with excess stomach acid, such as heartburn and indigestion.

Contraindications:

Renal impairment, hypertension, congestive heart failure (due to sodium content).



Side Effects:

Fluid and electrolyte imbalance, sodium retention, alkalosis.



GELUSIL



Class:

Combination antacid.

Mechanism of Action:

Gelusil contains aluminum hydroxide, magnesium hydroxide, and simethicone. Aluminum and magnesium hydroxides neutralize gastric acid, and simethicone reduces gas.



Pharmacodynamics:

Neutralizes gastric acid and reduces gas bubbles.

Pharmacokinetics:

Aluminum and magnesium ions are absorbed and excreted in the urine.



Indications:

Relief of heartburn, indigestion, and gas.

Contraindications:

Renal impairment, electrolyte imbalance.



Side Effects:

Constipation (aluminum-containing antacids), diarrhea (magnesium-containing antacids), belching (simethicone).



MUCAINE GEL



Class:

Combination antacid.

Mechanism of Action:

Mucaine Gel contains aluminum hydroxide, magnesium hydroxide, and simethicone. Similar to Gelusil, it neutralizes gastric acid and reduces gas.



Pharmacodynamics:

Neutralizes gastric acid and reduces gas bubbles.

Pharmacokinetics:

Aluminum and magnesium ions are absorbed and excreted in the urine.



Indications:

Relief of heartburn, indigestion, and gas.

Contraindications:

Renal impairment, electrolyte imbalance.



Side Effects:

Constipation (aluminum-containing antacids), diarrhea (magnesium-containing antacids), belching (simethicone).



TECHNICIAN ROLE



- Monitor for signs of electrolyte imbalance, especially in patients with renal impairment.
- Monitor for signs of constipation or diarrhea, especially in patients with renal impairment.



ASSESSMENT



- What is the Mechanism of Action of NA Citrate ?
- What all are the Indications of Mucaïne gel ?