**Drugs Used to Treat Digestive System Disorders**

Outline

**A- Treatment for Perioral Ailments**

(Oral Candidiasis , Xerostomia, Stomatitis)

**B – TREATMENT FOR STOMACH AILMENTS**

Drugs used to treat GERD

* + - Proton pump inhibitor
		- Histamine (H2) receptor Antagonist
		- Antacids

Antiemetics

**Perioral Ailments**

**Oral Candidiasis (Thrush)**

* + Candida Albicans (fungus)
	+ Concurrent antibacterial therapy
	+ Presence of cream colored or bluish white patches or exudate in the tongue, mouth or pharynx, that reveal bloody spots when scraped
	+ **Perioral Ailments**

**Xerostomia:**

* + Complication of anticholinergic therapy
	+ Dry mouth

**Stomatitis:**

* + Herpes type virus
	+ Aggravated by Cancer chemotherapy
	+ Mouth blisters and erosion

**Treatment for Perioral Ailments**

1. **Topical Treatments**

**Action:** Inhibit the synthesis of sterols in the fungal wall increasing the permeability of the fungal cell membrane which results in the loss of important cellular contents

**Indication**: Oral local treatment of Candidiasis or fungal infections caused by Candida species

**Adverse effects:** stomach upset, nausea and vomiting,

**Example:** (Nystatin Solution , Clotrimazole Troches or Lozenges )

1. **Saliva Substitutes (**Orex, Xero – Lube, Salivart,\moi-stir)
	* Relieves dry mouth and throat
	* Contains electrolytes

**3. Mouthwash and gargles** - dilute aromatic solutions that contain a sweetener, artificial coloring agent, antiseptic, anesthetic, astringest or anticaries agent

* Used for Halitosis (bad breath), or as gargles to treat colds or sore throats

**Nursing Responsibility**

1. Remove any partial or complete dentures and inspect client’s oral cavity. Inspect oropharynx using a tongue depressor and a flashlight.
2. Ascertain that client is not allergic to the medication
3. Instruct patient to brush his teeth and cleanse the area before he takes each dose. Instruct good oral hygiene techniques.
4. Dental examination every 6 months is recommended

**Acid-Related Diseases**

<https://mdmercy.com/centers-of-excellence/digestive-health-and-liver-disease/conditions-we-treat/stomach-and-intestinal-disorders/peptic-ulcer-disease?sc_lang=en>

Caused by imbalance of the three cells of the gastric gland and their secretions

* Most common: Hyperacidity
* Most harmful: Peptic ulcer disease (PUD)
* Lay terms for overproduction of HCl by the parietal cells: indigestion, sour stomach, heartburn, acid stomach

 **Gastroesophageal Reflux Disease
(GERD)**

“Heartburn”, Acid indigestion, sour stomach

* Common ailment manifested by retrosternal burning or stinging, acid regurgitation and occasionally difficulty swallowing, abdominal pain, cough, hoarseness, belching or bloating or wheezing.
* Reflux of gastric secretions (Pepsin and Hydrochloric Acid) up in the esophagus

**Peptic Ulcer Disease (PUD)**

* A localized lesion of the mucous membrane of the stomach (gastric ulcer) or duodenum (duodenal ulcer)

**Treatment for GERD & PUD**

**Non-DRUG Treatment**

* Avoiding foods and drugs that aggravate GERD
* Weight loss
* Avoiding tight fitting clothes
* Elevating head of the bed to reduce nocturnal symptoms

**Drug Treatment**

* Proton pump inhibitors
* H2 Receptor antagonists
* Antacids
* Promotility agents (anti emetics)
1. **Proton pump inhibitors (PPI)-**

 **Action:** suppress gastric acid secretion by inhibiting the hydrogen / potassium adenosine Triphosphate (ATPase) enzyme system at the secretory surface of the gastric parietal cells.

* They block the final step of acid production, inhibiting both basal and stimulated gastric acid secretion
* Oral PPI therapy appears to be as effective as parenteral therapy in managing active upper GI bleeding
* **Indications:** GERD, PUD, hypersecretory conditions with excessive gastric acid secretion.
* **Adverse effect:** stomach colic or pain
* **Example: Omeprazole, Esomeprazole**

**2. H2 Receptor antagonists**

* Less effective in acid suppression compared to PPI; used in less severe condition
* **Action:** prevents histamine from stimulating the receptors on gastric parietal cells , thus reducing the volume of gastric acid secretions and concentration
* **Indications:** management of intermittent gastritis
* **Adverse Effect:** constipation, dry mouth, confusion
* **Example: Ranitidine (Zantac),**

**3. Antacids**

* Chemical compound that buffer or neutralizes HCl in the stomach and thereby increase gastric ph
* Have rapid onset of action (20-40 min); if administered one hour after meals, the effects may be extended up to 3 hours
* Major ingredients include Aluminum salts, calcium carbonate , magnesium salts, and sodium bicarbonate alone or in combination

**Drug Interaction**

**Omeprazole & Warfarin ,**

* + Elevated Warfarin effect and INR for clients receiving this drug

**Omeprazole & Benzodiazipines, phenytoin**

* + Serum levels of Benzodiazipines, phenytoin may be increased

**Cimetidine & Warfarin, Benzodiazipines, Calcium Channel Blockers**

* + May interfere with the metabolism resulting in increased level or effect of the drug

**Antacids & Ibuprofen, Indomethacin,**

* + Reduces gastric distress associated with these drugs

**Nursing Considerations**

* PPIs are often used with NSAIDS to reduce the risk for upper GI bleeding
* Majority of medications must be scheduled **1 hour before or 2 hours after** the administration time for an antacids
* Serum levels of Warfarin, Diazepam, and Phenytoin may rise resulting in toxicity
* Therapy for the healing of ulcers should continue for at **least 4-6 weeks**
* Antacids should be used cautiously in clients with **symptoms of appendicitis, undiagnosed GI bleeding and intestinal obstruction**

**Nursing Responsibility**

1. Assess severity of heartburn and factors that increase its intensity , reflux of sour or bitter gastric contents into the mouth and atypical symptoms of Asthma, chronic cough, chronic laryngitis, sore throat and chest pain
2. Monitor for decreased GI reflux or heartburn and signs of generalized skin reactions (blisters, chills, fever, redness, tenderness, itching, burning or peeling of skin)
3. Record the frequency, character and color of stools
4. Perform fecal occult blood testing and monitor results of Hemoglobin and hematocrit
5. For patients with NGT, the intact granules in the capsule may be mixed in 45 ml of apple juice and placed in the tube. Flush the tube with additional apple juice to clear it.
6. Administer Antacid 1-3 hours after meals and 1-2 hours after other drugs
7. Refrigerate liquid antacids, but do not freeze them
8. Do not administer Calcium carbonate antacids with milk and milk products or other foods high in vitamin D because milk alkali syndrome may occur.

**Patient Education**

1. Assist patient to identify foods that would aggravate hyperacidity and acceptable attitudes
2. Discuss various weight control program and provide list for programs available
3. Instruct patient to swallow the capsule whole, not to be chewed or crushed, with a full glass of water to facilitate the action
4. Encourage patient to discontinue smoking. Smoking diminishes the effectiveness of H2 receptor antagonists in inhibiting nocturnal gastric acid secretions

**Anti-emetics**

* Prevents or relieves nausea and vomiting
* Neurotransmitter involved in controlling or preventing nausea and vomiting are: Dopamine, receptors in GIT and CTZ, and vomiting center
* **Action:** May exert their effects on the vomiting center , the cerebral cortex, the Chemoreceptor Trigger Zone (CTZ) or the vestibular apparatus and bind to a number of different receptors
* **Adverse effects:** Diarrhea, sleepiness, restlessness, increased weakness in
* **Example:** Phenothiazines (Chlorpromazine, Promethazine), Metoclopramide

**Nursing Responsibility**

1. Review medication regimen for the risk of significant drug interaction
2. Obtain baseline assessment of BP, mental status and nausea and vomiting, bowel status
3. Monitor presence of extra pyramidal effects and tardive dyskinesia
4. Administer oral preparations of Metoclopramide 30 minutes before meals and at bedtime
5. Administer IV injections slowly over 1-2 minutes. For an IV , dilute in 50 ml. of appropriate IV solution and infuse for not less than 15 minutes
6. Solutions of parenteral metoclopramide may be kept for 48 hrs. after dilution if protected from light
7. Caution patient against operating hazardous equipment, using alcohol, or other CNS depressants