



## Lecture 2 : Medical Surgical Nursing

### Management of patients with disorders of Gastro intestinal:

#### Gastroesophageal Reflux Disease:( GERD)

- Common affecting 15-20 of adults.
- 10% persons experience daily heart burn and indigestion.
- Gastroesophageal Reflux is the backward flow of gastric content in to the esophagus .

#### Gastroesophageal Reflux Disease:( GERD)

Gastroesophageal reflux disease is caused by the combination of excess reflux of gastric juice and impaired clearance of this refluxate from the esophagus. GERD is defined as symptoms or tissue damage caused by reflux of gastric contents with or without esophageal inflammation.

#### Pathphysiology:

Gastroesophageal Reflux result from transient relaxation or incompetence of lower esophageal sphincter ,or increased pressure within stomach .

Normally the peristalsis(contraction) in esophagus and bicarbonate in salivary secretions neutralize any gastric juice (acidic) that contact the esophagus , during sleep and with gastroesophageal Reflux , esophageal mucosa is damaged and inflamed , prolonged exposure causes ulceration , friable(Fragile) mucosa , and bleeding , untreated there is scarring ((injury) )and stricture.

### **Factor contributing to Gastroesophageal Reflux :**

1. Increased gastric volume (post meals)
2. Position pushing gastric contents close to gastroesophageal junction (such as lying down)
3. Increased gastric pressure (obesity or tight clothing)
4. Hiatal hernia

### **Symptoms of GERD:**

1. **Heartburn:** Heartburn, the most common symptom of GERD, is a substernal burning sensation that rises from the upper abdomen into the chest and neck.
2. **Regurgitation(vomiting):** Typical symptoms of GERD are heartburn and regurgitation; regurgitation of sour materials in mouth, pain with swallowing .
3. **Dysphagia:** Dysphagia, the sensation that swallowed material is lodged (remaining) in the chest, may be caused by esophageal inflammation or impaired motility. Esophageal cancer also is an important differential diagnostic consideration when dysphagia is the presenting complaint.
4. **Chest pain:** Chest pain due to GERD similar to angina pain.
5. **Asthma:** Extraesophageal manifestations of GERD include asthma, chronic cough, sinusitis, pneumonitis, laryngitis, and dental disease.
6. **Hoarseness**
7. **Sore throat with hoarseness**
8. **Chronic cough**



## 9. Nocturnal cough

## 10. Dyspepsia

## 11. Hiccups

## 12. Nausea

### Diagnosis:

- Barium swallow (evaluation of esophagus , stomach , small intestine).
- Upper endoscopy , direct visualization , biopsies may be done.
- Esophageal manometry , which measure pressure of esophageal sphincter and peristalsis (contraction) .
- 24 hour pH monitoring . esophageal pH monitoring is performed by placing a pH electrode just above the lower esophageal sphincter. This test has a sensitivity of 60-100%.

### Indications for esophageal endoscopy in patients with GERD:

1. Dysphagia
2. Persistent or progressive symptoms despite therapy
3. Mass
4. Stricture
5. Ulcer on upper gastrointestinal
6. Gastrointestinal bleeding or iron deficiency anemia

### Treatment options:

- **Lifestyle modification.**
- **Medication**

### Lifestyle modification include :

1. Strategies include elevation of the head of the bed to decrease reflux.
2. Reduced consumption (eating) of fatty foods, chocolate, alcohol, colas ,citrus juices, and tomato products.
3. Avoidance of the supine position after meals.
4. Avoidance of tight-fitting clothing.
5. Weight loss if obese.
6. Cessation of the smoking .

7. Eat small meals and stay upright 2 hours post eating , 3 hours prior to going to bed.

#### Medication include :

1. Antacids for mild to moderate symptoms e.g. Maalox , Mylanta , Gaviscon.
2. H<sub>2</sub>-receptor blocker decrease acid production e.g.  
**Cimetidine (Tagamet)**, 800 mg twice daily.  
**Ranitidine (Zantac)**, 150 mg four times daily.  
**Famotidine (Pepcid)**, 40 mg twice daily.  
**Nizatidine (Axid)**, 150 mg twice daily..
3. Proton pump inhibitors (PPIs)

Reduce gastric secretions , promote healing of esophageal erosion and relieve symptoms e.g. The five available PPIs, esomeprazole (Nexium), lansoprazole (Prevacid) and omeprazole (Prilosec) initially for 8 weeks or 3-6 months , pantoprazole (Protonix), and rabeprazole (AcipHex) . PPIs should be taken 20 to 30 minutes before the first meal of the day. PPIs are more effective than are H<sub>2</sub> blockers.

#### Proton Pump Inhibitors:

Drug	Dosage
Esomeprazole	20 mg or 40 mg, 20 to 30 minutes before the first meal of the day
Lansoprazole	30 mg, 20 to 30 minutes before the first meal of the day
Omeprazole	20 mg/day, 20 to 30 minutes before the first meal of the day
Pantoprazole	40 mg PO, 20 minutes before the first meal of the day or IV once daily
Rabeprazole	20 mg/day, 20 to 30 minutes before the first meal of the day

4.Promotility agent enhances esophageal clearance and gastric emptying e.g. Metoclopramide .



### **Surgical treatment:**

Surgery indicated for persons not improved by diet and life style change.

- laparoscopic procedures to tighten lower esophageal sphincter.
- Open surgical procedure

### **Complication :**

- Esophageal strictures , which can progress dysphasia
- Barrett's esophagus :change in cell lining esophagus with increased risk for esophageal cancer.

### **Nursing care :**

- Pain usually controlled by treatment
- Assist client to institute home plan