Lecture #6
First semester

Hiatal Hernia& Irritable Bowel Syndrome (IBS)

:by
lecturer
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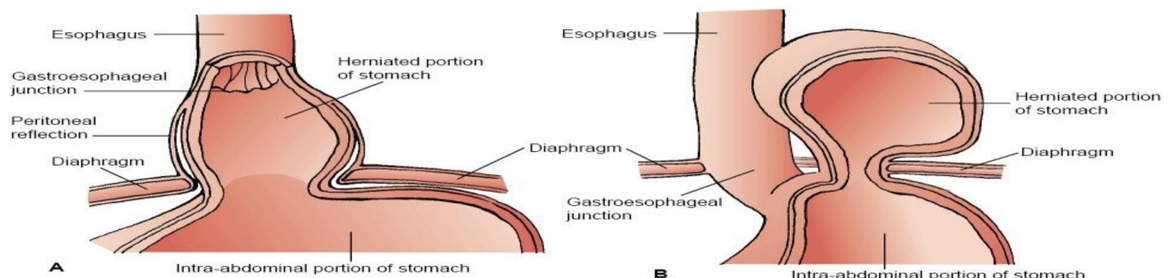
Definition

- A hiatal hernia is a protrusion of a portion of the stomach through the hiatus of the diaphragm and into the thoracic cavity.
- **Types of hiatal hernias** :There are two

1. Sliding hernia—the stomach and gastro-esophageal junction slip up into the chest (most common.)
2. Paraesophageal hernia (rolling hernia)—part of the greater curvature of the stomach rolls through the diaphragmatic defect.



Pathophysiology/Etiology

- Muscle weakening due to aging or other conditions, such as esophageal carcinoma.
- Trauma or following certain surgical procedures .
- Excessive intra-abdominal by; obesity, pregnancy, abdominal tumors, ascites, and repeated heavy lifting or strain
- Long term bed rest in a reclining position

Complications:

1. Incarceration of the portion of the stomach in the chest—constricts the blood supply
2. Esophagitis.
3. Barretts esophagus: is a pre-malignant condition in which the normal squamous lining of the lower esophagus is replaced by columnar mucosa (columnar lined esophagus) containing areas of intestinal metaplasia. It occurs as adaptive.

Clinical Manifestations

1. May be asymptomatic
2. Heartburn (with or without regurgitation of gastric contents into the mouth).
3. Dysphagia; chest pain

- **Diagnostic Evaluation**

1. Barium study of the esophagus outlines hernia .
2. Endoscopic examination visualizes defect .

Management

1. Elevation of head of bed (15–20 cm [6–8 in]) to reduce nighttime reflux .
2. Antacid therapy—to neutralize gastric acid .
3. Histamine-2 receptor antagonist (cimetidine, ranitidine)—if patient has esophagitis .
4. Surgical repair of hernia if symptoms are severe.

A. Fundoplication: Strengthens the lower esophageal sphincter by suturing the funds of the stomach around the esophagus and anchoring it below the diaphragm.

B. Angelchik Prosthesis: Is placement of a C shaped silicon device which is tied around the distal esophagus , anchoring it below the diaphragm .

Nursing Interventions/ Patient Education

Instruct patient on the <u>prevention of reflux of gastric contents into esophagus by :</u>

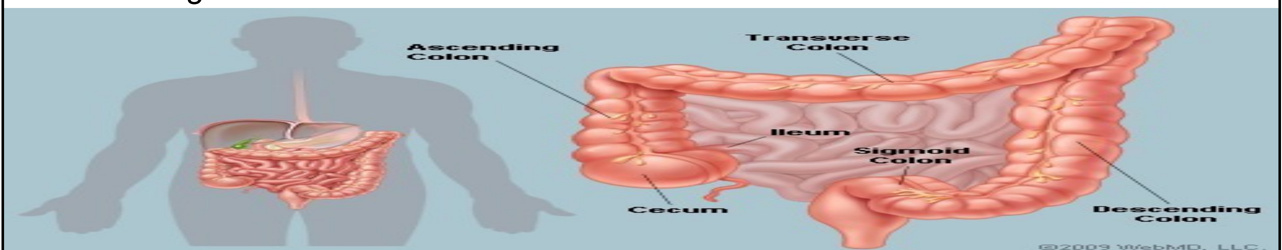
- ✓ Eating smaller meals .
- ✓ Avoiding stimulation of gastric secretions by omitting caffeine and alcohol .
- ✓ Refraining from smoking .
- ✓ Avoiding fatty foods—promote reflux and delay gastric emptying .
- ✓ Refraining from lying down for at least 1 hour after meals .
- ✓ Losing weight, if obese .
- ✓ Avoiding bending from the waist and/or wearing tight-fitting clothes or lifting heavy objects.
- ✓ Advice patient to report to health care facility immediately for the onset of acute chest pain—may indicate incarceration of a large paraesophageal hernia .

Irritable Bowel Syndrome (IBS)

Colon is the part of the large intestine , the last portion of the human gastrointestinal tract is approximately **5 to 5.5** feet long with a diameter of about **2.5 inches**, is located between the **cecum** and **rectum**.

It is divided into four sections ascending, transverse descending and sigmoid colon.

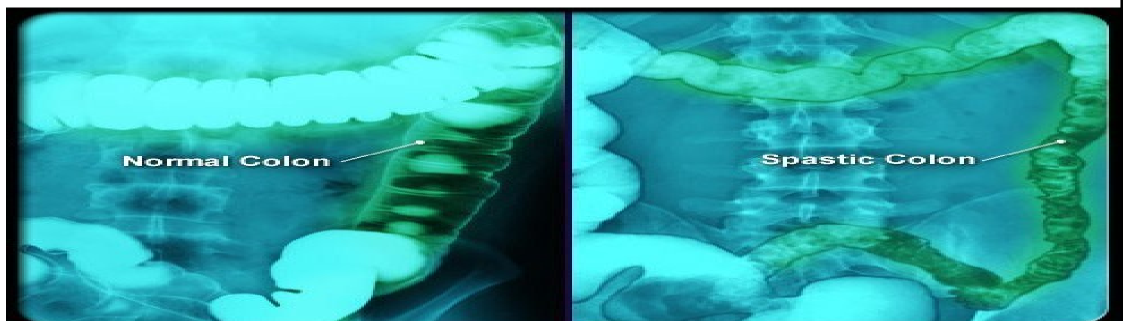
- The organ for storing waste products by elimination of toxic waste material in the form of stool.
- Reabsorbing water from wastes and maintaining water balance in the body.
  - Serves at the site for the growth of beneficial bacteria and other microorganisms



Definition

Irritable bowel syndrome (IBS)

Is a chronic functional disorder characterized by **recurrent abdominal pain** associated with **disordered bowel movements**, which may include **diarrhea**, **constipation**, or **both.**



Associated factors

- A complex interplay of (**genetic, environmental, and psychosocial factors)** are thought to be associated with the onset of IBS.
- It is believed that some **triggers** can either herald the initial onset of IBS or exacerbate symptoms in those with diagnosed IBS; these may include **chronic stress**, **sleep deprivation**, **surgery**, **infections**, **diverticulitis**, and **some foods** (e.g. milk, yeast products, eggs, wheat products, red meat).
- The diagnosis of IBS is made after tests confirm the absence of structural or other disorders.

Pathophysiology

IBS results from a **functional disorder** of **intestinal motility.**

The change in motility may be related to neuroendocrine dysregulation, especially changes in **serotonin signaling**, **infection**, **irritation**, or a **vascular** or **metabolic disturbance**.

The peristaltic waves are affected at **specific segments** of the intestine and in the intensity with which they propel the fecal matter forward.

There is no evidence of inflammation or tissue changes in the intestinal mucosa.

Clinical Manifestations

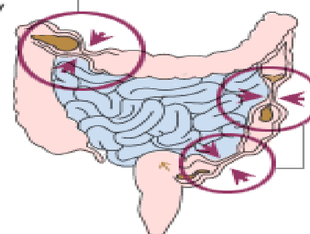
Symptoms can vary widely, ranging in intensity and duration from mild and infrequent to severe and continuous.

- ✓ **The main symptom** is an alteration in bowel patterns: **constipation** (classified as IBS-C), **diarrhea** (classified as IBS-D), or a **combination** of both (classified as IBS-M for "mixed"). The few patients with **IBS who do not fit any of these three categories of IBS-C, IBS-D, or IBS-M,** are classified as **IBS-U for "unknown"**.
- ✓ Pain, bloating, and abdominal distention often accompany changes in bowel pattern .
- ✓ The abdominal pain is sometimes precipitated by eating and is frequently relieved by defecation.
- ✓ IBS frequently occurs accompanied with other **GI disorders**, including gastroesophageal reflux disease (GERD), and with a variety of **non-GI functional disorders**, including chronic fatigue syndrome, chronic pelvic pain, fibromyalgia, interstitial cystitis, migraine headaches, anxiety, and depression.

Assessment and Diagnostic Findings

The clinical manifestations of IBS must be present sometime during **the last 3 months** with **onset for at least 6 months prior to diagnosis**. These manifestations include **recurrent abdominal pain** for at least one day weekly that is associated with **2** or **more** of the following

- ➢ Abdominal pain related to defecation;
- ➢ Abdominal pain associated with a change in frequency of stool;
- ➢ Abdominal pain associated with a change in form /appearance of stool.



Medical Management

The goals of treatment are to **relieve** a**bdominal pain** and **control diarrhea** or **constipation.**

- Lifestyle modification, including stress reduction, ensuring adequate sleep, and instituting an exercise regimen, can result in **symptom improvement**.
- The introduction of soluble fiber (e.g., psyllium) to the diet is important to IBS management.
- Restriction and then gradual reintroduction of foods that are possibly irritating may help determine what types of food are acting as irritants (e.g., beans, caffeinated products, corn, wheat, dairy lactose, fried foods, alcohol, spicy foods, aspartame).
- For patients with IBS-D, antidiarrheal agents (e.g., loperamide) may be given to control the diarrhea and fecal urgency.

Cont....

- ✓ Patients with all types of IBS complain of abdominal pain, this symptom may be mitigated by prescribing smooth muscle antispasmodic agents (e.g., dicyclomine [Bentyl]).
- ✓ Antidepressants may affect serotonin levels, thus modulating intestinal transit time and improving abdominal comfort.
- ✓ Peppermint oil, a complementary medication, has proven effective in diminishing abdominal discomfort.
- ✓ Other alternatives for IBS management include probiotics. Probiotics are bacteria that include Lactobacillus and Bifidobacterium that can be given to help decrease abdominal bloating.

Nursing Management

The nurse's role is to **provide patient and family education**.

- ✓ **The nurse emphasizes and reinforces good dietary habits** (e.g., avoidance of food triggers).
- ✓ A good way to identify problem foods is to keep a 1- to 2-week food diary.
- ✓ Patients are encouraged to eat at regular times and to chew food slowly and thoroughly.
- ✓ They should understand that although adequate fluid intake is necessary, fluid should not be taken with meals because this results in abdominal distention.
- ✓ Alcohol use and cigarette smoking are discouraged.
- ✓ Stress management via relaxation techniques, cognitive-behavioral therapy, yoga, and exercise can be recommended