الأشياء إلي حكت الدكتورة
نركز عليهم +
سنوات واسئلة
فخمة ☆

Pathophysiology-GASTROINTESTINAL DISEASES

Faculty of Pharmaceutical Sciences

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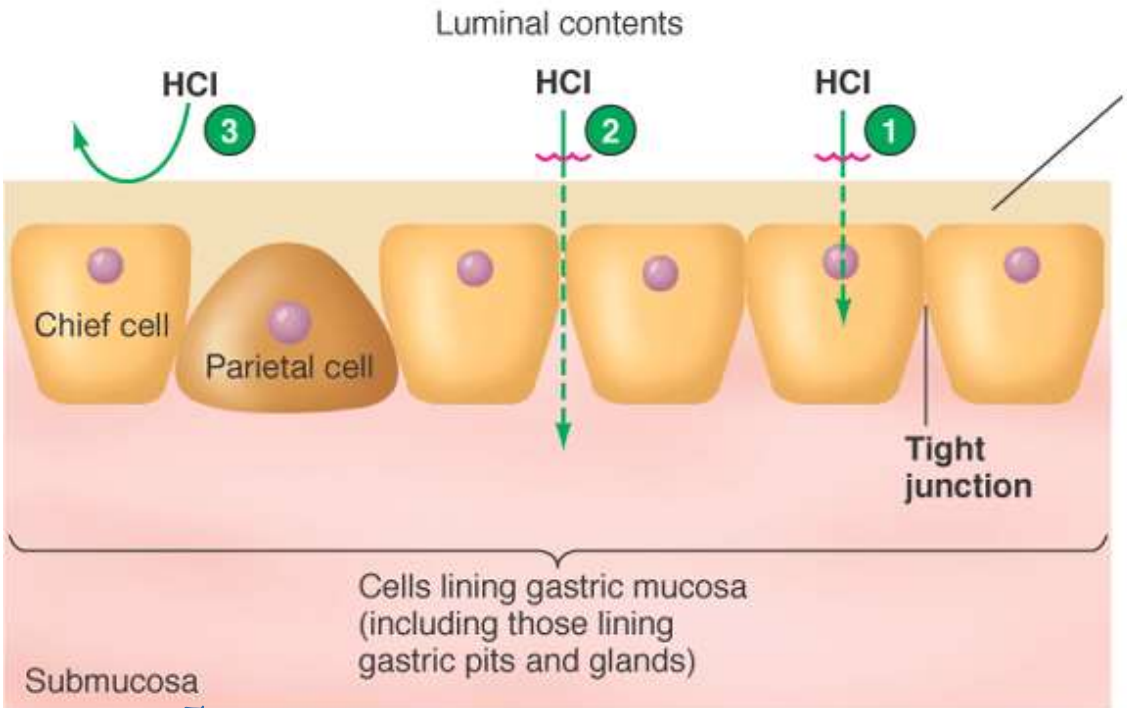
The gastric mucosal barrier



The gastric mucosal barrier made up of the following components enables the stomach to contain acid with injuring itself:

1. The luminal membranes of the gastric mucosal cells are impermeable to H^+ so that HCl cannot penetrate into the cells.
2. The cells are joined by tight junctions that prevent HCl from penetrating between them.
3. A mucus coating over the gastric mucosa offers further protection.

= Passage prevented

stomach inflamed

❑ GASTRITIS

- Acute gastritis
- chronic gastritis

Gastritis is an inflammation of the stomach that may occur in many forms.

➢ Acute Gastritis

متورم متقرّح

The gastric mucosa is inflamed and appears red and edematous. It may be ulcerated and bleeding if the mucosal barrier is severely damaged or the circulation is poor, which reduces tissue resistance.

Acute gastritis may result from:

- Infection by many types of microorganisms (e.g., bacteria and viruses).
- Allergies to foods such as shellfish (محار) or drugs.
- Ingestion of spicy or irritating foods, such as hot peppers.
- Excessive alcohol intake.
- ★ Ingestion of aspirin or other NSAIDs (especially on an empty stomach). Aspirin Ibuprofen they inhibit COX enzyme
- Ingestion of corrosive or toxic substances.
- Radiation or chemotherapy.

Question 32 / 40

Which of the following is CORRECT about the effect of NSAIDs on stomach?

1. ○ Decrease gastric acid secretion.
2. ○ Decrease prostaglandin secretion.
3. ○ Increase gastric acid secretion.
4. ○ A&B
5. ○ B&C

Next

إضافة ملاحظة

❑ Acute gastritis

Signs and symptoms

فقدان شهية

- Anorexia, nausea, vomiting.
- Hematemesis indicates ulceration and bleeding in the stomach.
- Epigastric pain, cramps, or general discomfort.
- Fever and headache usually accompany infection.
- In some cases, particularly with infections, diarrhea may develop.

تقيؤ دموي

In persons with severe or prolonged vomiting, there is a danger of dehydration, electrolyte loss, and metabolic acidosis, all of which require supportive treatment.

Certain infections may require treatment with antimicrobial drugs.

Question 23 / 40

2

A 55-year-old man presents to the emergency with severe abdominal cramps and vomiting which have been occurring several days ago. His laboratory findings indicate a sever metabolic acidosis and reduction in electrolytes levels. Which of the following conditions do think he has?

1. ○ Peptic ulcer
2. ○ Duodenal ulcer
3. ○ Heart burn
4. ◉ Initial acute gastritis
5. ○ None of the above

Next

إضافة ملاحظة

idiopathic

❑ Chronic Gastritis

- Characterized by atrophy of the mucosa of the stomach, with loss of the secretory glands.
- The loss of the parietal cells leads to **achlorhydria** (absence of hydrochloric acid in the gastric secretions)

secrete HCl

- Chronic gastritis is often seen in individuals with **chronic peptic ulcers**, those who **abuse alcohol**, and the **elderly**. Autoimmune disorders, for example, **pernicious anemia**, are associated with a type of chronic gastric atrophy.

عضي

فقر دم خبيث

- Many cases are **idiopathic**.

Feature	Acute Gastritis	Chronic Gastritis
Onset	Sudden	Long-term
Acid	Increased injury	Reduced secretion
Appearance	Red, swollen	Atrophic
Parietal cells	Preserved	Destroyed
Achlorhydria	Absent	Present
Bleeding	Common	Less common

Peptic Ulcer Disease

gastric ulcer → males and females

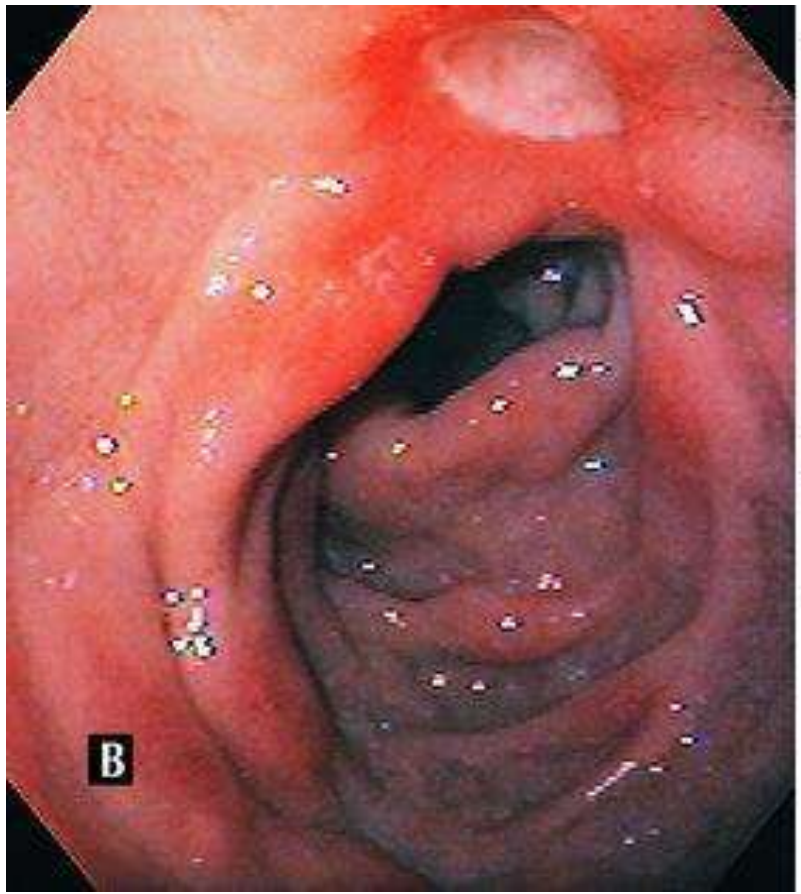
duodenal ulcer → in males more common

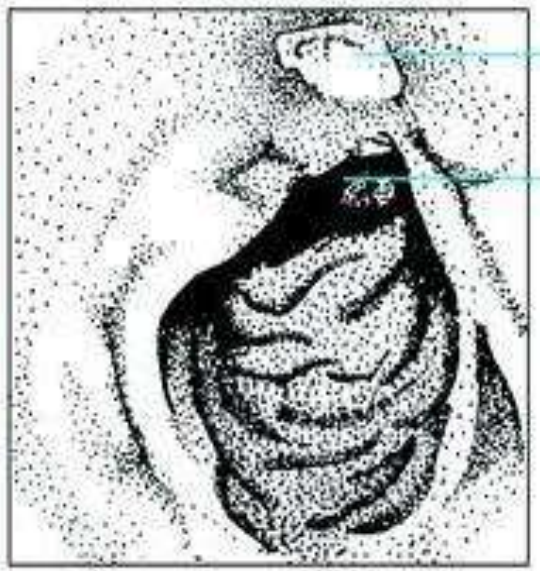
- **Break in the gastrointestinal mucosa exposed to gastric acid and pepsin more than 5 mm in diameter.**

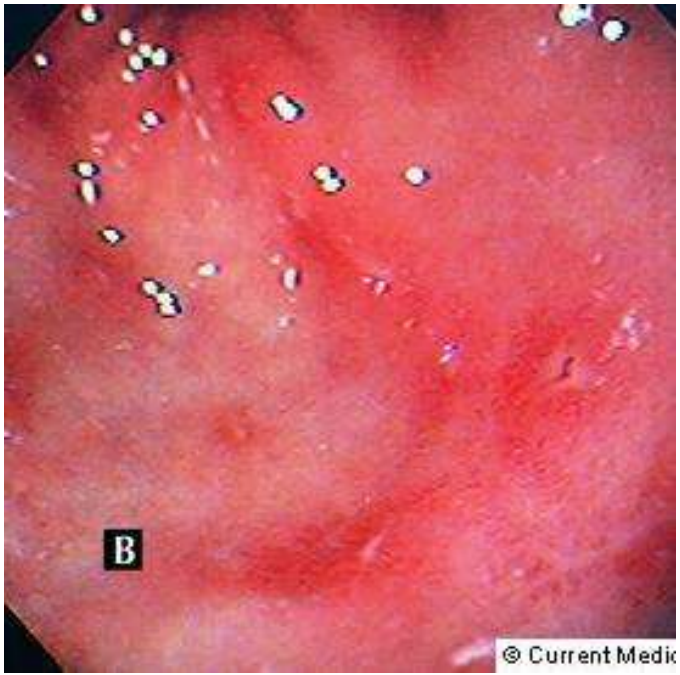
greater

- **Maybe acute or chronic.**
- The most common forms of peptic ulcers are duodenal and gastric ulcers.
- **Duodenal ulcers** occur five times more common than gastric ulcers.
- Duodenal ulcers are more common in **males** while gastric ulcers affect equally **males and females**.

Duodenal ulcer







EROSION

- A break in the GI mucosa- Less than 5 mm in diameter- not penetrating muscularis mucosa.
- May occur in acid-secreting or none acid-secreting mucosa.
- Peristalsis is not affected.
- Heals rapidly.

3

Question 30 / 40

Which of the following is NOT correct about gastric erosion?

1. ○ Is a break of less than 5 mm in diameter. ✓
2. ● Muscularis mucosa could be partially affected by erosion. ✗
3. ○ Does not influence the GIT movement. ✓
4. ○ B&C
5. ○ None of the above

Next

Sites of PUD

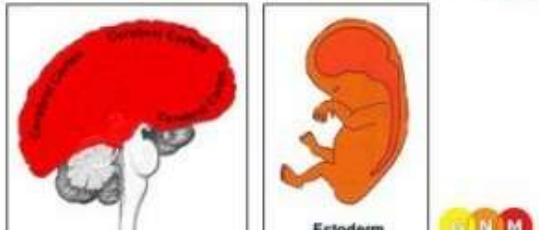
(peptic ulcer disease)

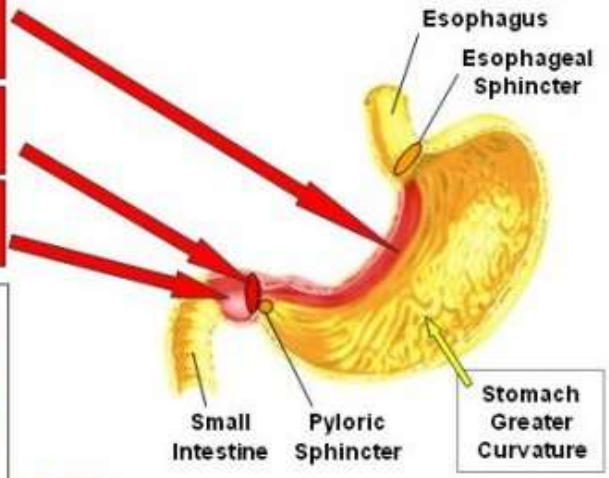
- PUD may occur in any area where acid and pepsin are present.
- Commonest sites:
  - ✓ Duodenum especially first part "duodenal bulb".
  - ✓ Stomach especially over the lesser curve.
- Other sites:
  - ✓ Lower end of the esophagus.
  - ✓ Site of gastro -jejunal anastomosis. "surgery"
  - ✓ Opposite to Meckel's diverticulum (congenital diverticulum, is a slight bulge in the small intestine present at birth).

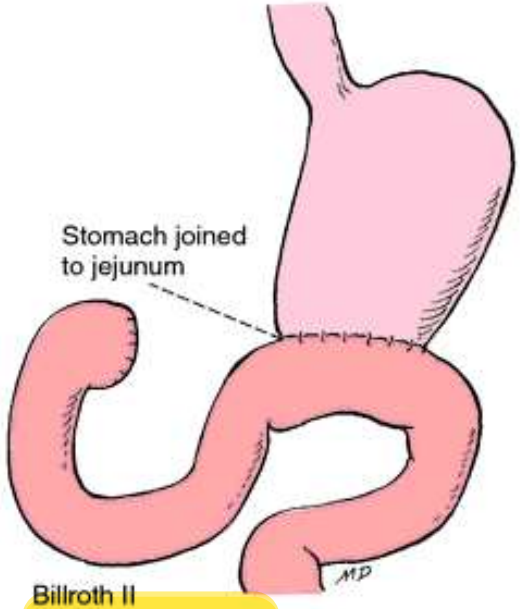
STOMACH
Small Curvature

PYLORUS

DUODENAL BULB



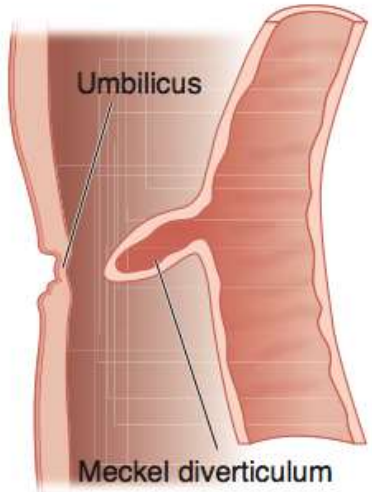




Billroth II (gastrojejunostomy)

surgical connection between the stomach and jejunum

Meckel diverticulum



cause or origin of a disease.

AETIOLOGY OF PUD

H-pyrole

1. **HELICOBACTER PYLORI-ASSOCIATED ULCERS.**

on empty stomach can causes ulcer

2. **NSAID-RELATED ULCERS:** (Due to inhibition of COX-1, prostaglandin-endoperoxide synthase).

inhibit COX-1 prostaglandin

protective

3. **HYPERSECRETORY STATES:** Zollinger-Ellison syndrome is caused by gastrin-secreting tumors in the pancreas or the upper part of your small intestine (duodenum).

4. **IDIOPATHIC.**

What is the primary mechanism by which NSAIDs contribute to the formation of peptic ulcers?

A. Stimulation of parietal cells to overproduce HCl

B. Activation of $H.pylori$ colonization

C. Inhibition of $COX-1$ and reduction of prostaglandin synthesis

D. Direct chemical corrosion of the mucosal epithelium

وجابت هدول وكان بدها الفولس
بس كان في خيار activation of prostaglandin
هو الجواب

AETIOLOGY OF PUD

1. **HELICOBACTER PYLORI-ASSOCIATED ULCERS.**
2. **NSAID-RELATED ULCERS: (Due to inhibition of COX-1, prostaglandin-endoperoxide synthase).**
3. **HYPERSECRETORY STATES: Zollinger-Ellison syndrome is caused by gastrin-secreting tumors in the pancreas or the upper part of your small intestine (duodenum).**
4. **IDIOPATHIC.**

↳ how a discase develop

Pathogenesis of PUD

IMBALANCE BETWEEN

AGGRESIVE

AND

DEFENSIVE FACTORS

- Acid.
- Pepsin.

- Prostaglandins.
- Mucosal blood flow.
- Mucus gel layer adherent to the mucosal surface.
- Bicarbonate.
- Tight epithelial junctions.
- Regeneration of the epithelial cell layer.
- Growth factors, eg: EGF.

epidermal growth factor

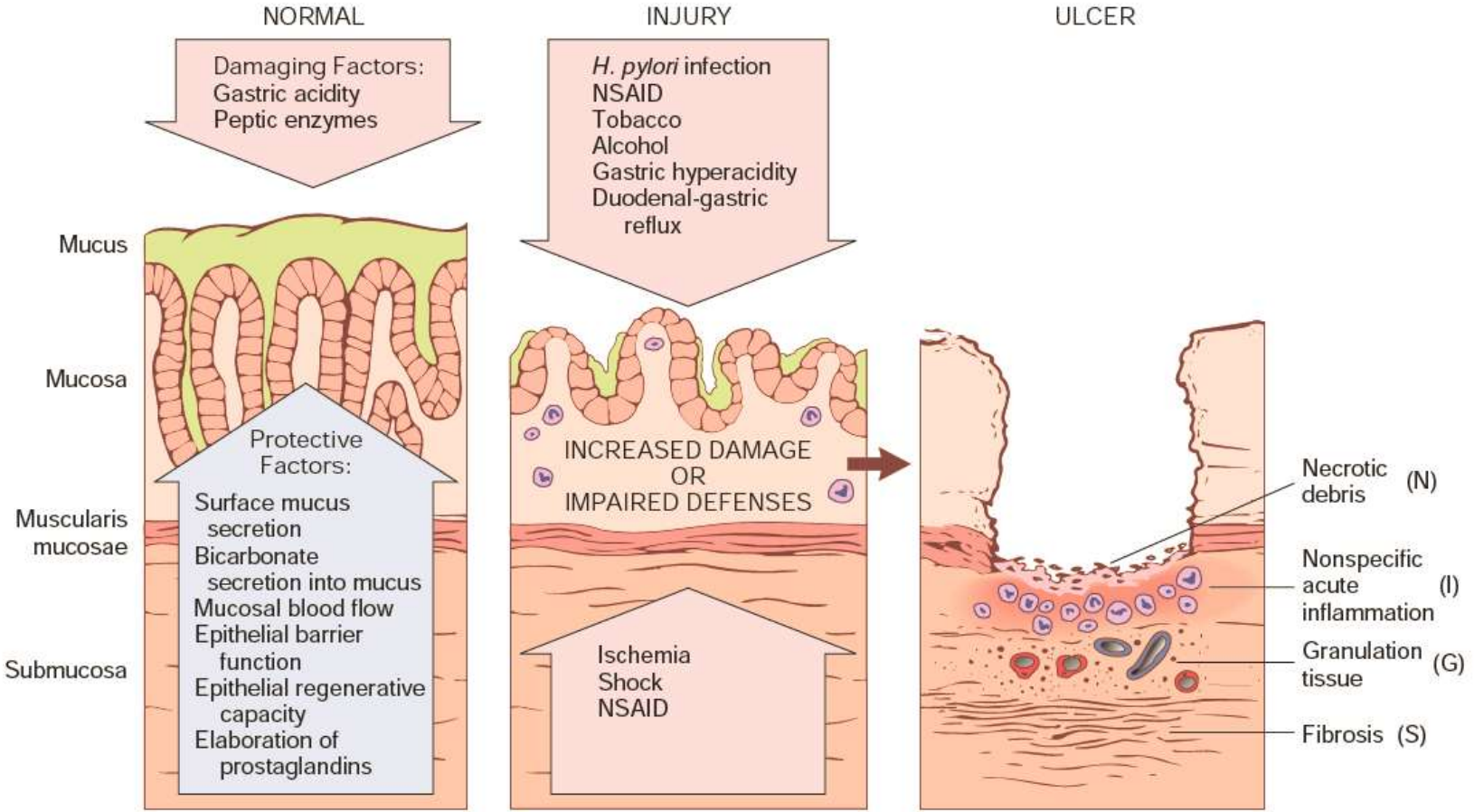
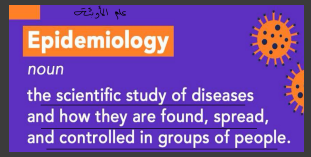


Figure 17-11 Mechanisms of gastric injury and protection. This diagram illustrates the progression from more mild forms of injury to ulceration that may occur with acute or chronic gastritis. Ulcers include layers of necrosis (N), inflammation (I), and granulation tissue (G), but a fibrotic scar (S), which takes time to develop, is only present in chronic lesions.



Epidemiology of PUD

Prevalence انتشار	Measures **existing** cases of disease and is expressed as a proportion

- Prevalence of about 5-10%.
- Varies in different communities.
- Higher prevalence in low socioeconomic classes and with certain diseases.
- duodenum ulcer
  DU more in males: M/F: 3:1. ★
- gastric ulcer
  GU is equal in both sexes but increases with age.
- FAMILY HISTORY: 3-4 increased risk.
- CIGARETTE SMOKING: ulceration increased.
- EMOTIONAL DISTURBANCES and STRESS: increase gastric acid secretion.

Fundus

Stress Ulcers

- Develop in response to major physiologic stress.

- People at high risk for the development of stress ulcers include:
  1. patients with **large–surface-area burns** (*Curling's ulcer*).
  2. patients exposed to **trauma**, **sepsis**, **acute respiratory distress syndrome**, **severe liver failure**, and **major surgical procedures**.
  3. **People admitted to hospital intensive care units**.

- Location of stress ulcers is **in the fundus** and body of the stomach and are thought to result from ischemia to the mucosal tissue and alterations in the gastric mucosal barrier.

*Another form of stress ulcer, called *Cushing ulcer* : **intracranial injury, operations, or tumors.**

Which type of stress ulcer is specifically associated with intracranial injuries or tumors?

A. Marginal ulcer

B. Cushing ulcer

C. Curling ulcer

D. Zollinger-Ellison ulcer

Question 29 / 40

4

Which of the following is NOT correct about PUD?

1. Increase the blood flow to GIT increase the risk of PUD. ✗
2. Decrease EGF levels increase the risk of PUD. ✓
3. Increase pepsin secretion increases the incidence of PUD. ✓
4. Gastro jejunal anastomosis in one of the rare sites for PUD. ✓
5. All the above.

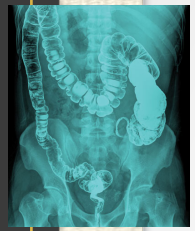
Next

CLINICAL PICTURE OF PUD

- Signs and Symptoms of PUD:
  - Epigastric pain.
  - Dyspepsia (Belly pain or discomfort, Bloating, Feeling uncomfortably full after eating, Nausea, Loss of appetite, Heartburn).
  - May be asymptomatic.

Exam Tip: Symptoms alone are not enough to diagnose PUD.

Diagnosis of PUD



Ulcer Type	Need Biopsy?
Gastric ulcer	Yes
Duodenal ulcer	Usually no

- ✓ Clinical picture is suggestive but not diagnostic.
- ✓ Diagnosis best by endoscopy.
- ✓ Barium meal is less helpful (infusion of the contrast medium barium sulfate, a radioopaque salt, coats the lining of the digestive tract, allowing accurate X-ray imaging of the esophagus, stomach, and small bowel).
- ✓ Serum gastrin; indicated if Zollinger-Ellison syndrome is suspected.
- ✓ Evaluation for H. pylori infection.
- ✓ Gastric ulcer should be biopsied to exclude malignancy.

خزعة

ورم خبيث

Question 25 / 40

5

A 42-year-old male presents to the emergency with heart burn and bloating. If you are his doctor, what is the test you do to diagnose his condition?

1. ○ Barium meal test is the priority in this case. ✗
2. ○ Serum gastrin could not be helpful. ✗
3. ○ Urea breath test should be done. ✓
4. ○ Endoscopy is the best procedure. ✓
5. ○ C&D

Next

إضافة ملاحظة

Which ulcer must always be biopsied?

- A. Duodenal ulcer
- B. Gastric ulcer
- C. Esophageal ulcer
- D. Stress ulcer

Answer: B. Gastric ulcer

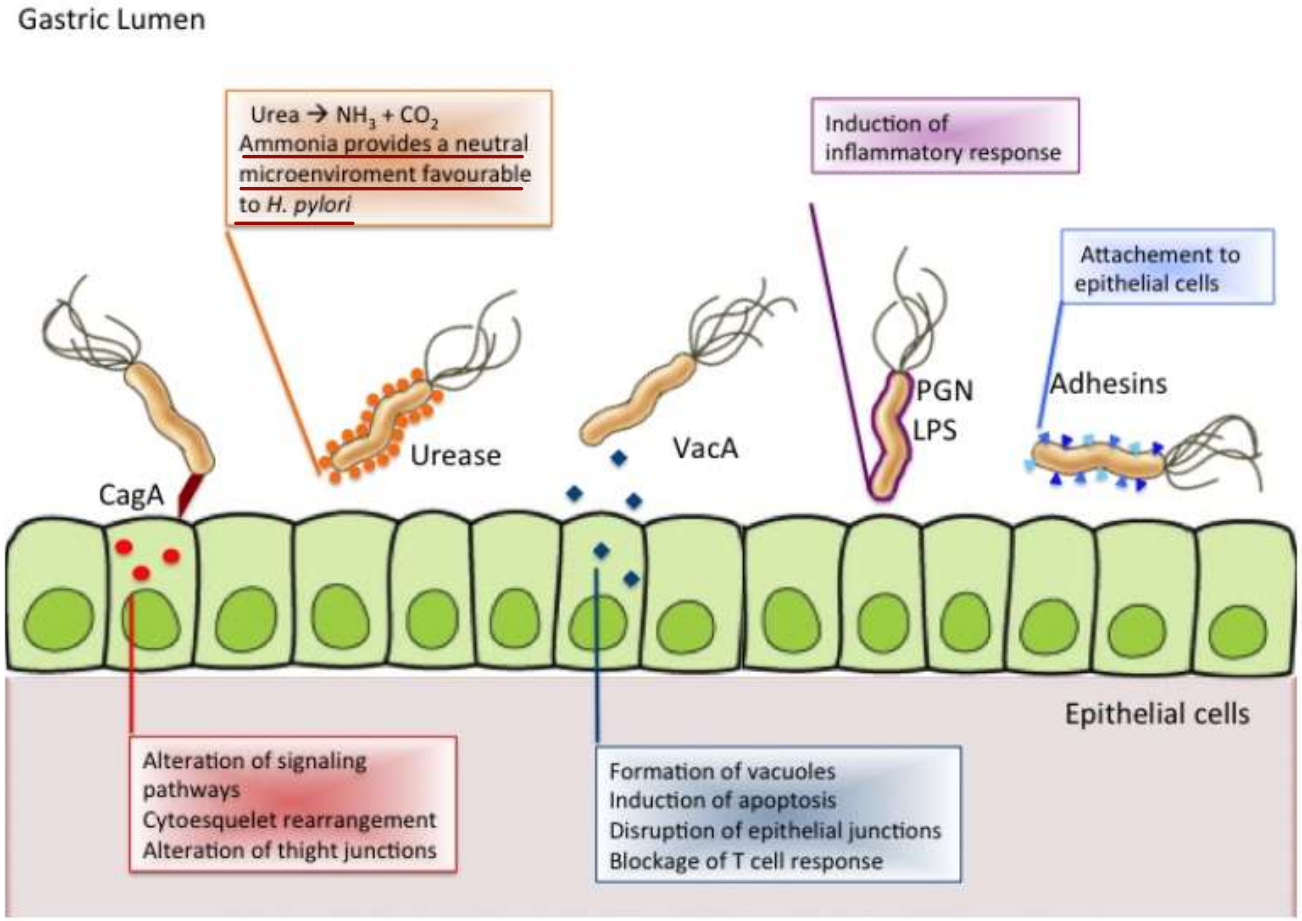
Elevated serum gastrin levels are most suggestive of:

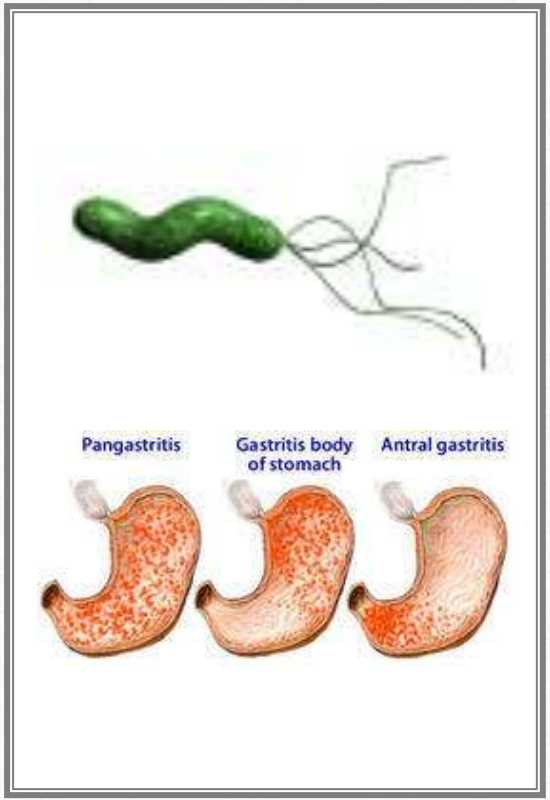
- A. GERD
- B. H. pylori infection
- C. Zollinger–Ellison syndrome
- D. Gastritis

Answer: C. Zollinger–Ellison syndrome

Helicobacter pylori

H-pylori

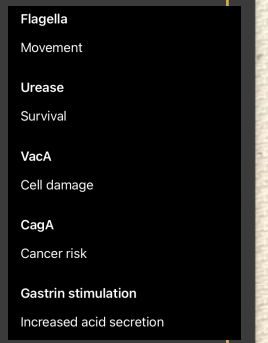




Helicobacter Pylori

- **Bacteria**
  - Gram –ve spiral bacterium.
  - 40% of patients >60 yrs are +ve for H.pylori.
  - Transmitted: possibly person to person.
  - Most common cause of antral gastritis (antrum part is the last part of the stomach toward the duodenum).

Helicobacter Pylori



urea breathing test

- **Mechanism of gastric injury:**
  - Breakdown of mucosal defenses. ✓
  - Increase gastrin-releasing peptide (GRP).
  - Decrease bicarbonate secretion.
  - Flagella, which allows the bacteria to be motile in viscous mucus.
  - Urease, which generates ammonia from endogenous urea and thereby elevates local gastric pH and enhances bacterial survival. $NH_3 + CO_2$
  - Adhesins that enhance bacterial adherence to surface foveolar cells.
  - Toxins, such as cytotoxin-associated gene A (CagA), may be involved in disease progression (such as induction of gastric cancer).

Role of H.pylori in GI diseases

	Healthy subjects	20-50%
★	Chronic active gastritis	100%
★	Duodenal ulcer	>90%
	Gastric ulcer	50 - 80%
★	Gastric adenocarcinoma	90%
	Gastric lymphoma	85%

Diagnosis of Helicobacter pylori infection

Invasive (through endoscopy):

- Gastric biopsy and staining.
- Culture of the bacterial specimen.
- Tests using urease enzyme in bacterial specimens.

Non-invasive:

- Urea breath test.
- H. pylori antibodies.
- Stool antigen.
- Salivary antigen.

Table 17-4 Complications of Peptic Ulcer Disease

Bleeding
Occurs in 15% to 20% of patients
Most frequent complication
May be life-threatening
Accounts for 25% of ulcer deaths
May be the first indication of an ulcer
Perforation abnormal opening in an organ
Occurs in up to 5% of patients
Accounts for two thirds of ulcer deaths
Is rarely first indication of an ulcer
Obstruction
Mostly in chronic ulcers
Secondary to edema or scarring
Occurs in about 2% of patients
Most often associated with pyloric channel ulcers
May occur with duodenal ulcers
Causes incapacitating, crampy abdominal pain
Can rarely cause total obstruction and intractable vomiting

ROBBINS AND COTRAN PATHOLOGIC BASIS OF DISEASE, Ninth Edition ISBN: 978-1-4557-2613-4

TREATMENT OF PEPTIC ULCER DISEASE

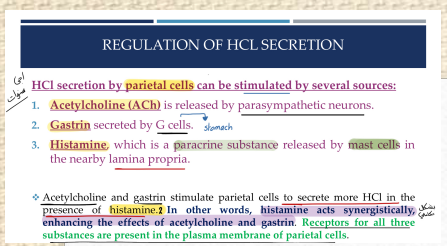
- **AIM OF TREATMENT:**
  - **RELIEVE SYMPTOMS.**
  - **HEAL THE ULCER.**
  - **PREVENT COMPLICATIONS.**
  - **PREVENT RECURRENCES.**

جابو سؤال عن antacid drugs كان عبارة عن
مقارنة بين دوا من ال ppi ودوا من الh2blockers
وكان ترو فولس
للامانة مافهمت شو بدو حطيتو فولس

ANTACIDS

- Rapid symptomatic relief.
- Cheap.
- Large amounts are required to heal ulcers leading to undesirable side effects.
- If taken on an empty stomach; they are effective only for 10-20 minutes.
- If taken one hour after meals, they are effective for 2-3 hours.
- Tablet preparations are less effective than suspensions.

more effective



remember?

HISTAMINE- RECEPTOR ANTAGONISTS (H2-Blockers)

- Act through blocking H_2 receptors in the parietal cells.
- Suppress nocturnal acid secretion by more than 90%.
- Suppress 24-hour acid secretion by 50-70%.
- Side effects :
  - CNS effects: headache, mental confusion.
  - Reversible gynecomastia (breast enlargment) and impotence. (Fertility decrease)
  - Interaction with drugs metabolized through hepatic cytochrome P-450 microsomal enzymes

HISTAMINE-RECEPTOR ANTAGONISTS (H2-Blockers)

Dine ينتهوا بـ

- CIMETIDINE
- RANITIDINE
- FAMOTIDINE
- NIZATIDINE

H^+ PROTON PUMP INHIBITORS (PPIs)

" most effective "
treatment

After Giving a PPI

A PPI irreversibly blocks the proton pump.

So now:

Gastrin → Histamine → Proton pump ❌ → Little or no acid

The signal is still being sent, but the final step is blocked.

Suppress acid secretion by non-competitively and irreversibly inhibiting the H+ , K+- ATPase of the gastric parietal cells. proton pump

Inhibit over 90%of 24-hour acid secretion.

Increase secretion of gastrin usually 2-3 times the baseline with proliferation and growth of ECL cells. انتشار

No carcinoid tumors were reported occurring in men due to PPIs.

Heal 50% of DUSs by 2 weeks, 90% in 4 weeks, and almost all by 6-8 weeks.

PROTON PUMP INHIBITORS (PPIs)

PPIs (azole) - لا تحفظ جرعات -

- Omeprazole: 10, 20 mg
- Lansoprazole: 15, 30 mg
- Pantoprazole: 20, 40 mg
- Rabeprazole: 10, 20 mg
- Esomeprazole:20, 40 mg
- Tenatoprazole: 40 mg: longer duration of action

"هم نعرفهم بالأمتحان"

"استئصال"

Eradication therapy for H.Pylori

في الجسم الي

- **In vivo, sensitive to the following agents:**
  - amoxycillin
  - tetracyclin
  - clarithromycin
  - Metronidazole, tinidazole
  - bismuth
  - PPIs

ميزوهم مث PPIs drugs

هم

- **Second line drugs:** Levofloxacin, gatifloxacin, rifabutin

جابت سؤال عن دوا ما بيعالج ال H pylori
وحاطة كل الادوية الي بتعالجهم الا واحد
طبعاً فيه فخ حاطة نوع دوا من ppi

Surgery for PUD

peptic ulcer disease

- Rare after the introduction of effective therapeutic agents except for complications.

6

Question 26 / 40

Which of the following is NOT correct about H. pylori?

1. ○ PPIs are part of its treatment. ✓
2. ○ It dose not increase the risk of gastric carcinoma.
3. ○ C&D
4. ○ It could be transmitted from person to another. ✓
5. ○ It could be diagnosed by stool antigen. ✓

Next

إضافة ملاحظة

stomach

Gastroesophageal Reflux Disease (GERD)

REFLUX ESOPHAGITIS

★ lower esophageal sphincter Failure

- Backward movement of gastric contents into the esophagus causing heartburn (burning chest pain) resulting from recurrent mucosal injury, often worse at night, when lying supine, or after consumption of foods or drugs that diminish lower esophageal sphincter tone.

- Associated with transient relaxations of the weak or incompetent lower esophageal sphincter.

The most common cause of gastroesophageal reflux disease is:

A. Excess gastrin

B. Helicobacter pylori

C. Weak lower esophageal sphincter

D. Pepsin deficiency

Clinical Manifestations of GESD

- **Heartburn:**

A. It is frequently severe,

B. occurring 30 to 60 minutes after eating.

C. It often is made worse by bending and lying down

D. is relieved by sitting upright.

E. Often, heartburn occurs during the night.

- **Belching** expelling gas of the stomach

- **Chest pain** (may be confused with angina).

1. is located in the epigastric or retrosternal area and
2. often radiates to the throat, shoulder, or back.

left neck shoulder

- **Respiratory symptoms** such as asthma (vagal-mediated bronchospasm), chronic cough, and laryngitis.

bronchoconstriction

- Complications, such as strictures and ***Barrett esophagus***.

- **Barrett esophagus** is characterized by a reparative process in which the squamous mucosa that normally lines the esophagus gradually is replaced by abnormal columnar epithelium resembling that in the stomach or intestines. It is associated with increased risk for the development of esophageal adenocarcinoma.

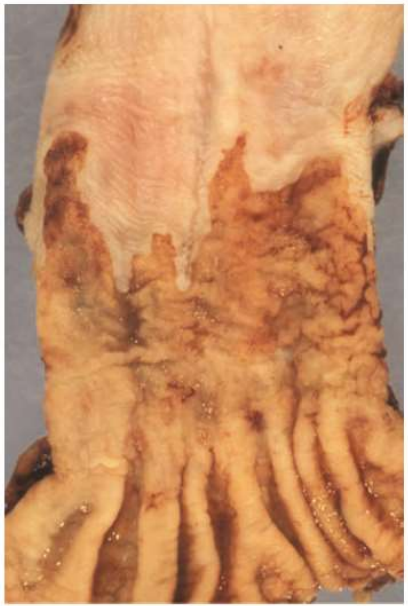


FIGURE 45.4 • The presence of the tan tongues of epithelium interdigitating with the more proximal squamous epithelium is typical of Barrett esophagus. (From Rubin R., Strayer D. S. (Eds.) (2012). *Rubin's pathophysiology: Clinicopathologic foundations of medicine* (6th ed., p. 611). Philadelphia, PA: Lippincott Williams & Wilkins.)

PORTH'S PATHOPHYSIOLOGY Concepts of Altered Health States NINTH EDITION, 2014

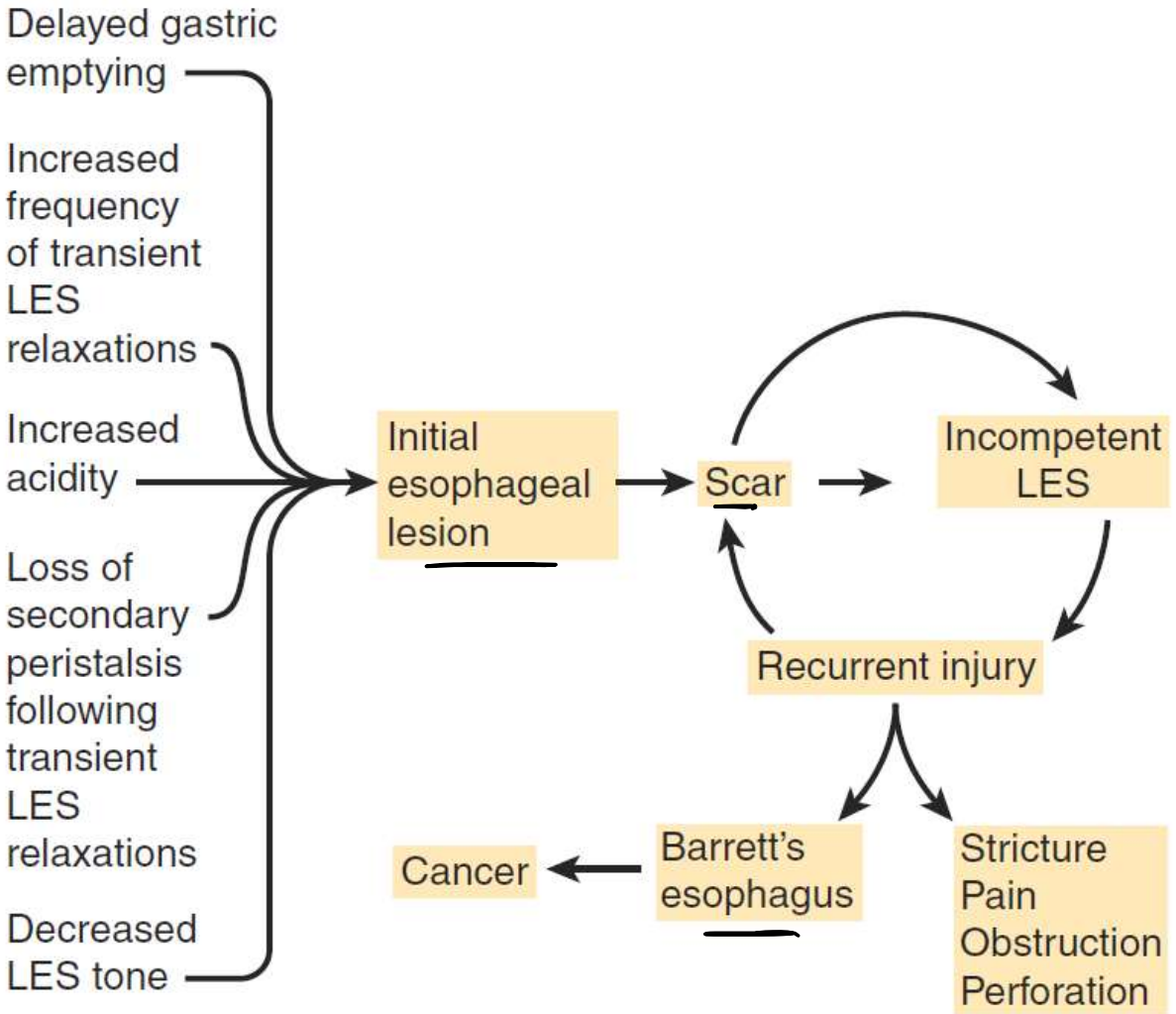


FIGURE 13–17 Pathophysiology of esophageal reflux disease.

TABLE 13–5 Modulators of lower esophageal sphincter pressure.

	Increase Pressure	Decrease Pressure
Hormones	Gastrin	Secretin
	Motilin	Cholecystokinin
	Substance P	Somatostatin
		Vasoactive intestinal peptide (VIP)
		Progesterone
Neural agents	α-adrenergic agonists	β-adrenergic agonists
	β-adrenergic antagonists	α-adrenergic antagonists
	Cholinergic agonists	Anticholinergic agents
Foods	Protein meals	Fat
		Chocolate
		Peppermint
Other	Histamine	Theophylline
	Antacids	Prostaglandins E_2, I_2
	Metoclopramide	Serotonin

Pathophysiology of Disease: An Introduction to Clinical Medicine Seventh Edition, 2010

Treatment

- The treatment of gastroesophageal reflux usually focuses on **conservative measures.**
- **Avoidance of positions and conditions** that increase gastric reflux.
- **Avoidance of large meals and foods** that reduce lower esophageal sphincter tone (*e.g.,* caffeine, fats, chocolate), alcohol, and smoking.
- **Medication:**
- Antacids or a combination of antacids and alginic acid. Alginic acid produces foam when it comes in contact with gastric acid; if reflux occurs, the foam rather than acid rises into the esophagus.
- Histamine-2 receptor (H2)–blocking antagonists.
- Proton pump inhibitors.

- **Surgical treatment may be indicated in some people.**

Question 2 / 40

7

Which of the following is CORRECT about GERD?

1. ○ It increases with decreased relaxation of the lower esophageal sphincter ✗
2. ○ Its pain is felt only in the epigastric area ✗
3. ○ Protein meals increase the risk of it ✗
4. ○ Alginic acid is one of the best treatments for it
5. ○ C&D

Next

ملاحظة

Cancer of stomach

metastasis ورم خبيث

لكن ممكن يطور لـ

polyps ورم حميدة

One of the leading causes of death in the united states.

It exhibits a male to female ratio of 2:1.

2 : 1

Risk factors for stomach cancer include:

- Genetic predisposition. ميل مسبق
- Carcinogens in the diet (nitroso compounds found in smoked and preserved food).
- Autoimmune gastritis. ——> chronic gastritis من أسباب
- ☆ Gastric adenoma and polyps. ورم Autoimmune disease
- Chronic infection by H.pylori act as a cofactor for some carcinomas.

Cancer of stomach

- Unfortunately, stomach cancers often are asymptomatic until late and early detection is usually difficult.

- Symptoms include:
  - Indigestion.
  - Anorexia nervosa.
  - Weight loss.
  - Epigastric pain.
  - Vomiting.
  - Abdominal mass.

Cancer of stomach

- **Diagnosis is accomplished by:**
  - Barium x-ray studies.
  - Endoscopy and computed tomography (CT)-scan.
  - Biopsy and cytologic studies of the gastric secretions.
- **Treatment:**
  - Radical subtotal gastrectomy is the treatment of choice.
  - Radiation and chemotherapy may be used for palliative purposes or to control the metastatic spread of the disease.

Question 31 / 40

Which of the following is CORRECT about stomach cancer?

1. ○ Nitroso compounds are risk factor for it
2. ○ Indigestion is one of the symptoms for it
3. ○ Cytologic study could be an approach for its diagnosis
4. ○ Chemotherapy is a palliative approach for its treatment
5. ○ All the above

Next

تحب تجيب عليهم
اسئلة كتير
اعمل جدول وقارن

Intestinal disorders

Irritable bowel syndrome

- It is a persistent or recurrent symptom of abdominal pain, altered bowel function, and varying complaints of flatulence, bloating, nausea and anorexia, constipation or diarrhea, and anxiety or depression.
- The pain is relieved by defecation and associated with a change in consistency or frequency of stools.
- The pain is usually intermittent cramping in the lower abdomen. It does not interfere with sleep.
- It results from dysregulation of intestinal motor and sensory function modulated by CNS. Motility is increased as a response to stress.
- Women are more affected compared to men.

ركزوا على مقارنة
male / women

Diagnosis:

- Continuous or recurrent symptoms of at least 12 weeks duration with two of three accompanying features: relief by defecation, onset is associated with a change in bowel frequency, and associated with a change in form of stool.
- History of lactose intolerance should be considered.
- Weight loss, anemia, fever, occult blood in the stool or nighttime symptoms, or malabsorption increases the likelihood of organic disease (any disease where observable measurable process such as inflammation and tissue damage).

Treatment

- No special diet is indicated but **adequate fiber intake is recommended**.

- Avoidance of offending food such as fatty and gas-producing foods, and alcohol. **Caffeine-containing beverages could be beneficial.**

مشروبات

- Pharmacological therapy includes **antispasmodic and anticholinergic drugs.**

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Question 1 / 40

Which of the following is CORRECT about Irritable bowel syndrome?

1. ○ It is not characterised by anxiety and depression ✗
2. ○ Diarrhea is the most common symptom for it ✓
3. ○ Recurrent symptoms of at least 2 weeks would be an accurate sign for it ✗
4. ○ Mebeverine is the most common drug for its treatment ✗
5. ○ None of the above

Next

ملاحظة

Inflammatory Bowel Disease

- **These include:**
  - **Ulcerative colitis:** nonspecific inflammatory bowel disease of unknown etiology that affects the mucosa of the colon and rectum.
  - **Crohn's disease:** nonspecific inflammatory bowel disease that may affect any segment of the GIT.
  - **Indeterminate colitis:** 15% of patients with IBD are impossible to differentiate.

"تمارغم"

Crohn's disease and ulcerative colitis share:

- ✓ Inflammation of the bowel.
- ✓ Lack of confirming evidence of the proven causative agent.
- ✓ Pattern of familial occurrence.
- ✓ Accompanied by systemic manifestation.
- ✓ Crohn's can affect any area of GIT from the esophagus to the anus while ulcerative colitis affects the colon and rectum.
- ✓ In Crohn's, the inflammation is often transmural but ulcerative colitis is typically restricted to the mucosa.

Crohn's disease

Clinical manifestation

- They both result from the activation of inflammatory cells with the elaboration of inflammatory mediators that cause nonspecific tissue damage.

- They characterize by remission and exacerbations of diarrhea, fecal urgency, and weight loss and it may lead to intestinal obstruction as a complication.

- Systemic manifestations include axial arthritis, inflammation of the eye, skin lesions. Inflammation of the mucus membrane of the mouth (stomatitis), blood disorders (anemia and hypercoagulability) and inflammation of the bile duct. In children, it causes growth retardation.

Crohn's disease
Treatment

- Treatments focus on terminating inflammation, promoting healing, maintaining adequate nutrition, and preventing complications.
- **Nutritious diet rich in calories, vitamins, and proteins is recommended**, fat is better to be avoided.
- **Medical therapy included:**
  - **Corticosteroids** (suppress acute clinical symptoms).
  - **Metronidazole** (treats bacterial overgrowth in the intestine).
  - **Immunosuppressants** (azathioprine, 6-mercaptopurine, methotrexate and cyclosporine).
  - **Monoclonal antibodies** (anti-TNF agents) for severe disease. (Etanercept, adalimumab, infliximab).

Ulcerative colitis

Risk factors

- **Age:** commonly less than 30. "women"
- **Race or ethnicity:** white is at higher risk.
- **Genetic.**
- **Diet (fatty diet) or oral contraceptives** increase the risk of the disease.

أكثر عرضة لـ cancer ←

No caffiene

Ulcerative colitis

Clinical manifestation

- Marked by attacks of diarrhea that may persist for days, weeks, or months and then subside, diarrhea usually with blood.
- Anorexia, weakness, and fatigue.
- In severe disease, fever, anemia, hypovolemia and hypoalbuminemia are common.
- In children, failure to growth
- Cancer of the colon is a common complication of ulcerative colitis.

١٠

Question 40 / 40

Arthritis of the axial skeleton is one of the clinical manifestations for ulcerative colitis?

of chohn's disease

1. ○ True
2. ✓ False

إضافة ملاحظة

الفروقات مهمة

Ulcerative colitis Treatment

- **Avoid caffeine, lactose, and gas-forming food.**
- Doctor may recommend **high protein, a high-calorie eating plan** that is **low in fiber.**
- Drugs including **corticosteroids and TNF inhibitors** can be used.
- **Unlike Crohn's disease, nicotine has shown clinical and histological improvement.**

  good for ulcerative colitis
- **Unlike Crohn's disease, UC responds to treatment by probiotic therapy.**
- **Iron is given to treat anemia** resulting from intestinal bleeding.
- **Unlike Crohn's, UC can be cured by surgical removal of the colon.**

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Question 20 / 40

Which of the following is NOT correct about the difference between ulcerative colitis and crohn's disease?

1. ○ Nicotine could be beneficial for ulcerative colitis only ✓
2. ○ Probiotic therapy could improve both diseases ✗
3. ○ Both diseases could be treated surgically ✗
4. ○ B&C
5. ○ All the above

Next

إضافة ملاحظة

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Question 35 / 40

Low fibre diet is beneficial in all intestinal disorders.

1. ○ True
2. ⊗ False

- beneficial in "ulcerative colitis"
  But not in irritable bowel syndrome

Next

Which of the following treatments is specifically noted for showing clinical improvement in Ulcerative Colitis, but not in Crohn's disease?

A. TNF inhibitors

B. Corticosteroids

C. Metronidazole

D. Nicotine

Colorectal carcinoma

- Colorectal cancer affects about 1 million persons worldwide.
- It peaks at **60-70 years of age** in patients with:
  - **Family history of cancer**.
  - **Persons with Crohn's disease or ulcerative colitis**.
  - **Persons with familial adenomatous polyps of the colon**.
- Diet including fat (increase bile salt synthesis) and refined sugar are harmful, while **fiber intake (increases stool bulk and removes carcinogens)** and **vitamins such as vitamin A, C, and E are of great benefit in neutralizing carcinogens.**
- **Aspirin has shown some benefit in prevention by inhibiting COX-2 which is overexpressed in colorectal cancer.**

Why is a high-fiber diet considered beneficial in reducing the risk of colorectal carcinoma?

A. It increases stool bulk and aids in the removal of carcinogens

B. It serves as a prebiotic to stimulate probiotic growth

C. It suppresses the synthesis of bile salts in the liver

D. It neutralizes bile salts to prevent them from becoming toxic

Colorectal carcinoma Clinical manifestation

Colon cancer may present for a long period of time without symptoms.

Bleeding is the symptom that causes the person to seek medical care.

Change in bowel habits, diarrhea or constipation, sense of urgency, or incomplete emptying of the bowel.

Pain usually is a late symptom.

Colorectal carcinoma
Diagnosis and treatment

Diagnosis:

- It can be detected by barium enema or colonoscopy, CT scan, pelvic magnetic resonance imaging (MRI), and ultrasonography can also be used.

Treatment:

- The only recognized treatment is **surgical removal**.
- **Preoperative radiation therapy** may be used.

قبل الجراحة

- **Postoperative adjuvant chemotherapy** is used.

بعد الجراحة

جابو اعراض ال colorectal carcinoma وانها
بتصيب عمر 60-70 سنة وانها شائعة الحدوث
للناس الي عندها polyps
وطالبين انه ايش مو من خصائص الcolorectal
carcinoma
الجواب : non لانهم كلهم مذكورين صح 🫶