

Gomel State Medical University

The faculty of foreign students

Department of foreign languages

**Subject: English**

**PRACTICAL CLASS 8**  
**for the 1<sup>st</sup> year students, 2<sup>nd</sup> semester**

**Topic:**  
**Digestive System: Pathology**

**Aims:**

- to learn the signs and symptoms of the digestive disorders
- to define the meaning of the basic pathologies of the oral cavity
- to learn the main pathologies of the upper intestinal tract

**Questions:**

1. What is the difference between the signs and symptoms?
2. What are the pathologies of the oral cavity?
3. What are the pathologies of the upper intestinal tract?

**PRACTICAL PART OF THE CLASS**

**I. The Signs and Symptoms**  
**SIGNS AND SYMPTOMS**

**anorexia**

**Lack of appetite.**

Anorexia (-orexia = appetite) often is a sign of malignancy or liver disease. **Anorexia nervosa** is loss of appetite associated with emotional problems such as anger, anxiety, and irrational fear of weight gain. It is an eating disorder and is discussed, along with a similar eating disorder, bulimia nervosa, in Chapter 22.

**ascites**

**Abnormal accumulation of fluid in the abdomen.**

This condition occurs when fluid passes from the bloodstream and collects in the peritoneal cavity. It can be a sign of neoplasm or inflammatory disorders in the abdomen, venous hypertension (high blood pressure) caused by liver disease (cirrhosis), or heart failure (Figure 5-17). Treatment for ascites includes administration of diuretic drugs and paracentesis to remove abdominal fluid.

**borborygmus (plural: borborygmi)**

**Rumbling or gurgling noise produced by the movement of gas, fluid, or both in the gastrointestinal tract.**

A sign of hyperactive intestinal peristalsis, borborygmi (bowel sounds) often are present in cases of gastroenteritis and diarrhea.

**constipation**

**Difficulty in passing stools (feces).**

When peristalsis is slow, stools are dry and hard. A diet of fruit, vegetables, and water is helpful. **Laxatives** and **cathartics** are medications to promote movement of stools.

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|---------------------------|--|
| <b>diarrhea</b>           | <p><b>Frequent passage of loose, watery stools.</b></p> <p>Abrupt onset of diarrhea immediately after eating suggests acute infection or toxin in the gastrointestinal tract. Untreated, severe diarrhea may lead to dehydration. Antidiarrheal drugs are helpful.</p>   |
| <b>dysphagia</b>          | <p><b>Difficulty in swallowing.</b></p> <p>This sensation feels like a "lump in the throat" when a swallowed bolus fails to progress, either because of a physical obstruction (obstructive dysphagia) or because of a motor disorder in which esophageal peristalsis is not coordinated (motor dysphagia).</p>  |
| <b>eructation</b>         | <p><b>Gas expelled from the stomach through the mouth.</b></p> <p>Eructation produces a characteristic sound and also is called <b>belching</b>.</p>   |
| <b>flatus</b>             | <p><b>Gas expelled through the anus.</b></p> <p><b>Flatulence</b> is the presence of excessive gas in the stomach and the intestines.</p>  |
| <b>hematochezia</b>       | <p><b>Passage of fresh, bright red blood from the rectum.</b></p> <p>The cause of hematochezia usually is bleeding due to colitis or from ulcers or polyps in the colon or rectum.</p>   |
| <b>jaundice (icterus)</b> | <p><b>Yellow-orange coloration of the skin and whites of the eyes caused by high levels of bilirubin in the blood (hyperbilirubinemia).</b></p> <p>Jaundice can occur when (1) excessive destruction of erythrocytes, as in <b>hemolysis</b>, causes excess bilirubin in the blood; (2) malfunction of liver cells (hepatocytes) due to <b>liver disease</b> prevents the liver from excreting bilirubin with bile; or (3) <b>obstruction of bile flow</b>, such as from choledocholithiasis or tumor, prevents bilirubin in bile from being excreted into the duodenum.</p> |
| <b>melen</b>              | <p><b>Black, tarry stools; feces containing digested blood.</b></p> <p>This clinical sign usually reflects a condition in which blood has had time to be digested (acted on by intestinal juices) and results from bleeding in the upper gastrointestinal tract (duodenal ulcer). A positive result on stool guaiac testing (see page 193) indicates blood in the stool.</p>   |
| <b>nausea</b>             | <p><b>Unpleasant sensation in the stomach associated with a tendency to vomit.</b></p> <p>Common causes are sea and motion sickness and early pregnancy. Nausea and vomiting may be symptomatic of a perforation (hole in the wall) of an abdominal organ; obstruction of a bile duct, stomach, or intestine; or exposure to toxins (poisons).</p>   |
| <b>steatorrhea</b>        | <p><b>Fat in the feces; frothy, foul-smelling fecal matter.</b></p> <p>Improper digestion or absorption of fat can cause fat to remain in the intestine. This may occur with disease of the pancreas (pancreatitis) when pancreatic enzymes are not excreted. It also is a sign of intestinal disease that involves malabsorption of fat.</p>  |

## II. Pathologic conditions of the oral cavity

### ORAL CAVITY AND TEETH

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|----------------------------|---|
| <b>aphthous stomatitis</b> | <p><b>Inflammation of the mouth with small, painful ulcers.</b></p> <p>The ulcers associated with this condition are commonly called <b>canker</b> (KÄNK-ër) <b>sores</b>; the cause is unknown (Figure 5-18B).</p>   |
| <b>dental caries</b>       | <p><b>Tooth decay.</b></p> <p><b>Dental plaque</b> results from the accumulation of foods, proteins from saliva, and necrotic debris on the tooth enamel. Bacteria grow in the plaque and cause production of acid that dissolves the tooth enamel, resulting in a cavity (area of decay) (Figure 15-18C). If the bacterial infection reaches the pulp of the tooth, root canal therapy may be necessary.</p> |



|                            |   |
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| <b>herpetic stomatitis</b> | <p><b>Inflammation of the mouth caused by infection with the herpesvirus.</b></p> <p>Painful fluid-filled blisters on the lips, palate, gums, and tongue, commonly called <b>fever blisters</b> or <b>cold sores</b> (Figure 15-18D). It is caused by herpes simplex virus type 1 (HSV1). Treatment is with medication to relieve symptoms. Herpes genitalis (due to HSV2) occurs on the reproductive organs. Both conditions are highly contagious.</p>  |
| <b>oral leukoplakia</b>    | <p><b>White plaques or patches on the mucosa of the mouth.</b></p> <p>This precancerous lesion (Figure 15-18E) can result from chronic tobacco use (pipe smoking or chewing tobacco). Malignant potential is assessed by microscopic study of biopsied tissue.</p>  |
| <b>periodontal disease</b> | <p><b>Inflammation and degeneration of gums, teeth, and surrounding bone.</b></p> <p><b>Gingivitis</b> (Figure 15-18F) occurs as a result of accumulation of <b>dental plaque</b> and <b>dental calculus</b> or <b>tartar</b> (a yellow-brown calcified deposit on teeth). In <b>gingivectomy</b>, a periodontist uses a metal instrument to scrape away plaque and tartar from teeth; any pockets of pus are then drained and removed to allow new tissue to form. Localized infections are treated with systemic antibiotics.</p> |

### III. Pathologies of the Upper Gastrointestinal tract

#### UPPER GASTROINTESTINAL TRACT

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|---|---|
| <b>achalasia</b>                              | <p><b>Failure of the lower esophagus sphincter (LES) muscle to relax.</b></p> <p>Achalasia (-chaliasia = relaxation) results from the loss of peristalsis so that food cannot pass easily through the esophagus. Both failure of the LES to relax and the loss of peristalsis cause dilatation (widening) of the esophagus above the constriction. Physicians recommend a bland diet low in bulk and mechanical stretching of the LES to relieve symptoms.</p>                    |
| <b>esophageal cancer</b>                      | <p><b>Malignant tumor of the esophagus.</b></p> <p>The most common symptom of esophageal cancer is difficulty swallowing (dysphagia). Smoking and chronic alcohol use are major risk factors. Long-term irritation of the esophagus caused by gastric reflux is a premalignant condition called <b>Barrett esophagus</b>. Surgery, radiation therapy, and chemotherapy are treatment options.</p>   |
| <b>esophageal varices</b>                     | <p><b>Swollen, varicose veins at the lower end of the esophagus.</b></p> <p>Liver disease (such as cirrhosis and chronic hepatitis) causes increased pressure in veins near and around the liver (<b>portal hypertension</b>). This leads to enlarged, tortuous esophageal veins with danger of hemorrhage (bleeding). Treatment includes drug therapy to lower portal hypertension and banding or tying off the swollen esophageal veins (Figure 5-19A and B).</p>               |
| <b>gastric cancer</b>                         | <p><b>Malignant tumor of the stomach.</b></p> <p>Chronic gastritis associated with bacterial infection is a major risk factor for gastric carcinoma. Gastric endoscopy and biopsy diagnose the condition. Cure depends on early detection and surgical removal of the cancerous tissue.</p>   |
| <b>gastroesophageal reflux disease (GERD)</b> | <p><b>Solids and fluids return to the mouth from the stomach.</b></p> <p><b>Heartburn</b> is the burning sensation caused by regurgitation of hydrochloric acid from the stomach to the esophagus. Chronic exposure of esophageal mucosa to gastric acid and pepsin (an enzyme that digests protein) leads to <b>reflux esophagitis</b>. Drug treatment for GERD includes antacid (acid-suppressive) agents and medication to increase the tone of the LES.</p>                   |
| <b>hernia</b>                                 | <p><b>Protrusion of an organ or part through the muscle normally containing it.</b></p> <p>A <b>hiatal hernia</b> occurs when the upper part of the stomach protrudes upward through the diaphragm (Figure 5-20A). This condition can lead to GERD. An <b>inguinal hernia</b> occurs when a small loop of bowel protrudes through a weak lower abdominal muscle (Figure 5-20B). Surgical repair of inguinal hernias is known as <b>herniorrhaphy</b> (-rrhaphy means suture).</p> |

peptic ulcer

**Open sore in the lining of the stomach or duodenum.**

A bacterium, *Helicobacter pylori* (*H. pylori*), is responsible for peptic ulcer disease. The combination of bacteria, hyperacidity, and gastric juice damages epithelial linings. Drug treatment includes antibiotics, antacids, and agents to protect the lining of the stomach and intestine.

#### IV. Training exercises

**H** Give the names of the following gastrointestinal signs or symptoms based on their descriptions.

1. passage of bright red blood from the rectum \_\_\_\_\_
2. lack of appetite \_\_\_\_\_
3. fat in the feces \_\_\_\_\_
4. black, tarry stools; feces containing digested blood \_\_\_\_\_
5. abnormal accumulation of fluid in the abdomen \_\_\_\_\_
6. rumbling noise produced by gas in the GI tract \_\_\_\_\_
7. gas expelled through the anus \_\_\_\_\_
8. an unpleasant sensation in the stomach and a tendency to vomit \_\_\_\_\_
9. loose, watery stools \_\_\_\_\_
10. difficulty in passing stools (feces) \_\_\_\_\_
11. difficulty in swallowing \_\_\_\_\_

**L** Complete the following terms from their meanings given below.

1. membrane (peritoneal fold) that holds the intestines together: mes\_\_\_\_\_
2. removal of the gallbladder: \_\_\_\_\_ectomy
3. black or dark brown, tarry stools containing blood: mel\_\_\_\_\_
4. high levels of pigment in the blood (jaundice): hyper\_\_\_\_\_
5. pertaining to under the tongue: sub\_\_\_\_\_
6. twisting of the intestine on itself: vol\_\_\_\_\_
7. organ under the stomach that produces insulin and digestive enzymes:  
pan\_\_\_\_\_
8. lack of appetite: an\_\_\_\_\_
9. swollen, twisted veins in the rectal region: \_\_\_\_\_oids
10. new connection between two previously unconnected tubes: ana\_\_\_\_\_
11. absence of acid in the stomach: a\_\_\_\_\_
12. return of solids and fluids to the mouth from the stomach: gastro\_\_\_\_\_  
re\_\_\_\_\_ disease
13. removal of soft tissue hanging from the roof of the mouth: \_\_\_\_\_ectomy
14. formation of stones: \_\_\_\_\_genesis.