# **Odessa National Medical University**

Department of Surgery #4 with the course of oncology

LECTURE " Diseases of the esophagus "

The lecture discussed at the methodical conference of department

" " \_ \_\_ 201

Ser. Chair Professor Tkachenko A.I.

Odessa – 2017

1. Relevance of the topic. Substantiation of the topic.

In the practical work of a doctor, diseases of the esophagus are not uncommon. This organ is susceptible to a variety of pathological conditions, since it is the link between the mouth and the stomach. Therefore, the first "shock" of the external environment in the form of food is received on it. Treatment of diseases of the esophagus refers to the complex chapters of modern surgery. The technical difficulties of surgical interventions are associated with the localization of the esophagus, the peculiarities of its topography and the synthopia of the border organs.

That's why, doctors of any specialty should be familiar with this pathology.

The material that is presented in the lecture is of great importance in the professional training of a specialist:

- students of the medical faculty in the future practical work should be familiar with the diseases of the esophagus, be able to diagnose them, and orient themselves in organizational and therapeutic tactics;

- Students of the Faculty of Dentistry should be guided in these issues, in connection with the fact that the pathology of the mouth and teeth has a direct effect on food and water and can contribute to the development of its diseases.

2. Objectives of the lecture:

- training

Know:

- anatomical and functional features of the esophagus;

- general data on morbidity in Ukraine;

- general clinical course and symptoms of esophageal diseases;

- classification of diseases of the esophagus;

- survey methods;

- indications for conservative and surgical methods of treatment of these patients;

- general methods of treatment of diseases of the esophagus;

- methods of surgical treatment;

- issues of disability and disability.

- Educational

The materials of the lecture are aimed at forming students' logical and professional clinical thinking, the doctor's responsibility for the condition of the sick person. The issue of medical ethics and deontology is covered.

**4. Содержание лекционного материала:**

структурно-логическая схема содержания темы;

## classification

diagnostics

adittional

clinically

**Treatment**

conservative

surgical

complications

SURGICAL DISORDERS of the esophagus. Treatment of diseases of the esophagus refers to the complex chapters of modern surgery. The technical difficulties of surgical interventions are associated with the localization of the esophagus, the peculiarities of its topography and the synthopia of the border organs. The esophagus is part of the gastrointestinal tract between the pharynx and the stomach. Its length in a man of medium height is about 25 cm. Distinguish between cervical, thoracic and abdominal parts of the esophagus. In the cervical region, it is located behind the trachea. In the thoracic upper part, the aorta, bifurcation of the trachea and bronchi, directly border on it, and in the middle and lower regions it passes in the posterior mediastinum behind the pericardium. Passing the esophageal opening of the diaphragm, the esophagus flows into the cardiac area of ​​the stomach. The proximity of vital organs causes the frequency of damage to the aorta of the trachea, bronchi and heart in trauma and the involvement of these organs in the pathological process in inflammatory and oncological diseases. Surgical access to the esophagus is carried out by colotomy through the cell spaces and fascia of the neck, by thoracotomy (right-sided - to the upper and middle thoracic areas, left-sided - to the thoracic lower part), by laparotomy to the abdominal part. Combined access is possible - laparotorakotomy on the left side of Osawa-Garloku, laparotomy with sagittal diaphragmotomy according to Savinykh, laparocervical access without opening the pleural cavity. Of the diagnostic studies, the most informative are x-ray, endoscopic and morphological (cytological and histological) methods. Esophageal burns result from accidental or deliberate ingestion of aggressive liquids, concentrated acids or alkalis. Accidental burns occur in children or adults in a state of intoxication. Intentional - in persons committing suicide. Occasionally, there are burns of the esophagus with an unintentional ingestion of boiling water. It is known that accidents in a fire are often accompanied by a burn of the upper respiratory tract. Dissociative contraction of the muscles of the laryngopharynx by inhalation can lead to ingestion of hot air, and then a burn of the upper respiratory tract is aggravated by a burn of the esophagus. The clinical course of esophagus burns goes through 4 stages.

The first stage - an acute period, characterized by severe pain, shock, exot - and endogenous intoxication. At this stage, necrosis of calcined tissue occurs. With a deep burn, the situation is complicated by mediastinitis, which almost always predetermines a tragic outcome.

The second stage occurs when necrosis does not affect all or most of the mucosa on a large extent, does not extend to the muscular membrane and is not complicated by mediastinitis. In this stage necrosis is rejected, scarring begins, and here and there epithelization, proceeding from the remaining islets of the mucosa.

The third stage is characterized by ongoing scarring and stricture formation.

IV-th - the outcome of a burn, stricture, sometimes leading to the disappearance of the lumen of the esophagus, its complete obliteration, the transformation from the tube into the cicatricial lobe. In the first stage, the treatment of the esophagus burn is aimed at overcoming the shock, intoxication and providing optimal conditions for the course of the burn wound. If the burn is local, then drinking (alkaline with acid, and acidified with an alkaline burn), enveloping types of food, mucous porridges, sea-buckthorn, peach and sunflower oil is allowed.

Anti-shock therapy and detoxification is performed under the traditional program. As antibacterial therapy, antibiotics of a wide spectrum of action are prescribed.

With an extensive and deep burn, the esophagus must be rid of the passage of food. There are 2 ways for this: 1) parenteral nutrition with amino acid mixtures in combination with iv in the introduction of energy sources (fat emulsions and glucose solutions); 2) enteral feeding through the fistula formed from the stomach (gastrostomy) or the gut (ejinostoma).

The first way is modern, promising, but economically almost inaccessible (the drugs are very expensive). Gastrostoma allows you to enter into the stomach a sufficient amount of varied food. However, the stomach is also burned and its wall is unsuitable for the formation of gastrostomy. Burns of the stomach are most expressed in "narrow" places - in the field of cardia and the pylorus. In these cases gastrostomy should be supplemented with gastrojejunastomosis. If the lesion of the stomach is extensive, it is necessary to resort to an ejinostomy according to Maidla. Carrying out these operations, one must always remember that at the final stage of treatment the patient is undergoing an operation - esophagoplasty, the formation of an artificial esophagus.

Formed for the sake of saving life, the stomach or intestinal fistula

In cases of mediastinitis, mediastinotomy is performed. When the thoracic upper division is affected, the upper mediastinotomy is according to Razumovsky, with the lesion of the lower thoracic - the abdominal diaphragm mediastinotomy by Saviny-Rozanov. Access to the middle third of the mediastinum by Nasilov suggests resection of the cervical part of two or three ribs.

In the second and third stages, the main task is the creation of optimal conditions for the flow of the process. Surgical interventions are either already performed in the first stage, when their necessity was dictated by vital indications, or they are clad in the fourth stage, when the main goal is to restore the patency of the esophagus. In the third stage, usually buzhirovanie, which in many cases allows you to prevent the development of catastrophic strictures and avoid large, complex and - most importantly! - risky recovery operations. It should, however, not forget that the bougie - a simple manipulation of the plan - is also very dangerous. In inexperienced hands bougie is complicated by perforation of food, which is fraught with deadly mediastinitis.

In the fourth stage, when all the active inflammatory and destructive processes have already taken place, and a strict stricture has been formed before the doctor, the only task is to restore the patency of the scar-narrowed esophagus or create a new artificial food-water.

At this stage, two methods remain important: bougie and reconstructive operations. The volume of reconstruction and the choice of plastic material depend on the level and extent of the stricture, the preservation of the stomach, the nature of the operation performed at the first stage according to the vital indications and the anatomical features of the patient. The most common interventions are esophagogastroplasty according to Kirchner, esophagus plastic from the large curvature of the stomach according to Juan-Gavriliu, segmental plastic thin or jejunum, total plastic of the esophagus thin (according to Ru-Herzen-Yudin) or colon with esophageal-intestinal anastomosis on the neck. Three variants of the location of the intestinal graft becoming an artificial esophagus are used: 1) in the posterior mediastinum, that is, in the bed of the natural esophagus (this is the most risky option, as mediastenitis develops when the graft nutrition is disturbed); 2) in the anterior mediastinum, behind the sternum, according to Eremeevu (this is the shortest path); 3) under the skin, in front of the sternum (this is the safest path, since if the transplant feed fails, it is easy to remove, and there are no intrathoracic complications).

Traumatic injuries of the esophagus are observed with blunt injuries,

Knife and gunshot wounds, ingestion of foreign bodies, most often - sharp bones (chicken, rabbit, fish, etc.). Often, iatrogenic lesions, which are applied by the doctor in case of diagnostic and treatment procedures. Most often, iatrogenic lesions occur in the bougie of the esophagus and inadvertent removal of foreign bodies. Regardless of the cause of the damage, the result is a serious infectious and inflammatory process in the paraeofugal tissue. If the perforation or injury of the esophagus is localized in the cervical region, a deep phlegmon of the neck develops. It is manifested by pain when swallowing and turning the head, high body temperature and intoxication, severe soreness, infiltration and emphysema of soft tissues. If the perforation is in the thoracic region, me-diastenitis develops, which, in addition to the features characteristic of deep neck phlegmon, is distinguished by Horner's syndrome (nitosomes, miosis, endophthalmus); it develops in connection with the irritation of the vagus nerves passing through the mediastinum. Ossiplasty of the voice comes in connection with the violation of the innervation of the laryngeal ligament apparatus by recurrent nerves. Emphysema of the mediastinum, easily detected by fluoroscopy, through the upper aperture of the chest extends to the neck, where it is determined palpation.

Damage to the diaphragm segment and abdominal esophagus is rare. These are spontaneous ruptures that occur when ingestion of an excessively large lump of food that sticks in the region of diaphragmatic narrowing of the esophagus causes powerful uncoordinated peristaltic waves, leading to rupture of the wall. These variants entered the literature as the Boerhave syndrome, named after the Dutch naval commander, who was the first patient to recognize the nature of the fatal catastrophe.

Regardless of the location, the diagnosis is specified by esophagoscopy and X-ray examination. As a contrast agent, water-soluble compounds containing three iodine atoms (triiodtrast, urotrast, cardiotrast, etc.) are used, the streaks of the contrast material allow one to obtain an orientation in the localization, extent and shape of the fistula.

Treatment of esophageal injury surgical. Removal of foreign bodies is carried out by esophagoscopy. The proliferation of flexible fiber-optic endoscopes revolutionized the technique of their removal. At perforation in the first hours access to the esophagus is made, the sutures are superimposed on the perforation or wound, and the surrounding tissue is drained. The specificities of access to the esophagus are associated with the localization of the lesion: collotomy - with damage to the cervical region, upper mediastinotomy by Razumovsky with damage to the thoracic upper section, lower abdominal mediastinotomy by the Savins with damage to the thoracic lower part, laparotomy - with abdominal injuries.

Diverticula represent saccular protrusions of the esophagus wall that can form in any part of the esophagus, but the most frequent localization is the "weak" site - the pharyngo-esophageal junction, the level of the tracheal bifurcation and the epiphrenic segment. According to their pathoanatomical characteristics, they are divided into 2 categories: diverticula, the wall of which retains all layers of the esophagus, including the muscular, and diverticula, devoid of the muscle layer and consisting only of the mucous and under the mucosa. The latter represent co-axillary hernia. According to the pathogenesis diverticula are divided into pulsion and traction. Pulsatory diverticula develop due to a sharp increase in the inside of the esophageal pressure with powerful peristaltic waves pushing from within and protruding the weak points of the wall. Tractional diverticula are not pushed out, but as it were pulled out into the environment by paraseophagic inflammatory processes and scars. Large diverticula represent saccate protrusions of the esophagus with a diameter of 6-8 cm.

Clinical manifestations of large diverticula are associated with the fact that the food stagnant in them undergoes the processes of fermentation and putrefaction. This is accompanied by a bad smell from the mouth, an evil-belching eructation. The joining infection complicates the pathology of the inflammatory process. Develops diverticulitis, which manifests itself in dysphagia, pain in the chest. The most serious complication is the perforation of the diverticulum with the development of mediastinitis.

A decisive role in diagnosis is played by X-ray examination with liquid X-ray contrast preparations and fibro-esophagoscopy. Small diverticula less than 2 cm in the largest dimension are asymptomatic and may be an accidental finding of an x-ray or endoscopic examination.

Treatment of esophageal diverticula is surgical. The protrusion is cut off, and the formed deffect in the esophagus wall is layer-by-layer closed, and the surgeon must control the lumen of the esophagus during suturing, as the most severe complication of the operation is cicatricial stricture. When the diverticulum is perforated, urgent mediastinotomy is performed, which is completed by rational drainage.

Varicose veins of the esophagus are conditional, on the basis of localization of the pathological process, can be attributed to diseases of the esophagus. In fact - this is only a sign of portal hypertension in patients with cirrhosis of the liver, a symptom manifested by pathological changes in the veins of the esophagus. Significantly less frequent causes of varicose veins of the esophagus are Budd-Chiari (thrombophlebitis of the hepatic veins) or thrombosis of the subheading sources of the portal vein, in particular, thrombophlebitis of the splenic vein. Nevertheless, although the pathogenesis of varicose veins of the esophagus is associated with liver disease or other causes of portal hypertension, the object of major manifestations and complications of the disease, as well as the object of most surgical operations, is the esophagus. This justifies the presentation of some aspects of the pathology of the veins in the section of surgical diseases of the esophagus.

The main and often the only clinical manifestation of varicose veins of the esophagus is bleeding, which develops when the varicose node is ulcerated or traumatically damaged. Portal hypertension determines the profuse character of the bleeding, which most often manifests with abundant bloody vomiting. In contrast to duodenal and gastric bleeding with the eruption of "coffee grounds", vomit in the haemorrhage of varicose veins contain scarlet blood with fresh clots. Passage of blood into the aboral parts of the gastrointestinal tract leads to melena, and with very massive bleeding, to the release of a crispy "crimson jelly." In some patients, the cavity of the stomach is performed by a huge bundle, which is a cast of the stomach. It blocks the passage of the content in the aboral direction. In these cases, the blood does not reach the rectum, and a visual evaluation of the excrement leads to deceptive pseudo-fragments. Outside the bleeding, the varicose veins of the esophagus are asymptomatic and are detected by X-ray or endoscopy, which are performed in accordance with the program for diagnosis of diseases of the upper gastrointestinal tract and liver.

In the treatment of patients with varicose veins, the esophagus distinguishes between urgent measures that are performed with bleeding, and planned, aiming to prevent possible blood flow.

An effective way to stop bleeding immediately is the injection of the Blackmore-Sangstacken probe. The ball-shaped and cylindrical balloons located at the distal end of the probe in the inflated condition squeeze the veins and stop the bleeding.

The proliferation of fiber-optic and videoscopic optics facilitated the introduction of endoscopic methods for stopping bleeding. Currently, endoscopic phlebosclerosis is being used. Under the control of the endoscope, endovascular injection of thrombovar, ethoxy-sclerol, 66% glucose solution, paravasal injection of 70 \* -th ethanol is performed. Endovascular selective embolization of the veins of the stomach and esophagus is also performed. Effectively proposed by M.D.Patsioroy into the intramuscular administration of pitu-intrin, which contributes to the reduction of portal pressure.

The simplest of the "open" operations is esophagogastotomy with stitching and dressing of varicose veins. The so-called uncoupling operations remain in the service of surgeons, in which the varicose veins are deprived of connection with the main vessels, which retain high blood pressure. This is a Tanner operation, in which all layers of the cardial region of the stomach intersect. In Walker's operation, only the esophageal mucosa is dissected. The splenectomy, whose justification is that the varicose veins lose contact with the high-pressure splenic vein, is not lost on the intersection and re-tying of the short gastric vessels.

The operations of port-systemic shunting (portocageal, splenorenal, mesenteric-caval anastomoses) at the height of bleeding are rarely used due to high lethality. In a planned manner, they are used as effective means to reduce portal hypertension and prevent bleeding from varicose veins. In this case, one should clearly imagine the possibilities and negative side effects of these significant reconstructions of the vascular bed and venous blood flow. First of all, these are symptomatic, pre-anticipatory or overcoming complications associated with portal hypertension. Reducing the pressure in the portal vein system, it contributes to the elimination of ascites, and prevents blood flow from the varicose veins of the esophagus. No more than that! To treatment of a cirrhosis of a liver (which is incurable!) These operations of the attitude or relation have no. A negative side result of these operations is the removal of blood flowing from the intestine into the system of the inferior vena cava, bypassing the liver. This leads to a significant decrease in liver detoxification, an increase in endogenous intoxication with the outcome of encephalopathy, which in some patients is so severe that it discredits the positive effect of the operation. The hepathectomy with orthotopic transplantation of the donor liver is considered to be the only effective method of treatment of liver cirrhosis.

Achalasia of the esophagus and cardia is a disease that for a long time was called esophagospasm or cardiospasm. The essence of the disease is the narrowing of the terminal section of the food-water, leading to a violation of the patency of food up to complete obstruction. In the basis of the pathological process is a violation within the wall neural plexus of food-water (Auerbach's plexus), which coordinates the peristalsis of the esophagus with contractions and dilatation of the cardiac pulp. The pathology of Auerbach's plexus leads to a loss of cardiac capacity for relaxation. There is persistent esophagocardiospasm.

This is the first stage of the disease. In the second stage, a prenenotic expansion of the esophagus with compensatory hypertrophy of the muscles occurs, trying to overcome the obstruction. In the third stage, in the terminal section of the esophagus, corresponding to the "bottleneck", degenerative changes occur in the muscles, which are replaced by scar tissue. Cardiac spasm is transformed into persistent cicatricial cardiostenosis. Finally, in the fourth stage, when the process in the terminal section of the esophagus is completed, expansion of the esophagus continues, the diameter of which sometimes reaches 10 or more centimeters, its capacity increases to 1.5-2.0 liters, its contours are prone to bizarre deformation, approaching the Latin letter S.

Clinical manifestations are associated with dysphagia, which in the first and second stages is transient in nature, becomes constant in the third and fourth stages and is burdened by abundant regurgitation. Food that lingers in the esophagus, wanders, rots, gives off a bad smell. Acceding infection complicates the disease with esophagitis, which occurs with heartburn, chest pains or back pain. In the 3rd - 4th stages, patients lose weight, weaken, deplete, outwardly resemble patients with advanced malignant tumor.

Diagnosis of cardiac achalasia is based on anamnestic data, radiographic and / or endoscopic findings of the esophagus. The leading complaint is dysphagia, the severity of which depends on the stage of the disease. X-ray picture is characterized by a significant expansion of the esophagus and a narrowing (usually conical) of its terminal section. The main problem of diagnosis is the differentiation of achalasia with food-water cancer or cardiac cancer that spreads to the esophagus. Classical signs of cancer - filling defects, "erosion" of contours, stiffness of the wall - is not always detected with malignant growth, sometimes noted with achalasia.

Esophagoscopy with biopsy also does not always solve the problem, especially if there is a significant narrowing that hampers the progress of the endoscope and prevents the taking of an informative biopsy. As a rule, if the result of a histological examination indicates cancer, the diagnostic problem can be considered solved. The result may be false negative. According to this last, decisive fact of differential diagnosis is laparotomy. Indications for laparotomy should be wide enough, as the cost of erroneous diagnosis of achalasia in patients with cancer or cardia is the life of the patient.

Treatment of achalasia in the first stages of the disease is associated with manipulations aimed at expanding the narrowed section. The procedure is performed by a special tool - the Stark dilatator. In the first and second stages, esophago-cardiodilution is effective. Patients willingly go to this procedure, which seems tempting to an alternative surgical operation. Tempting, but not safe! Forcible expansion of the narrowed section can lead to a rupture of the esophagus, which will require urgent surgery. Reconstruction of the damaged segment is a difficult technical task, which is complicated by the inevitable mediastenitis and peritonitis, a serious condition of the patient. In the third and fourth stages - treatment is only surgical. Ezofagocardiomyotomy is performed in one of the modifications. The operation is small, but very thin and elegant. In the longitudinal direction, the cicatricial case is dissected over the narrow place. Since only the muscle layer is involved in the scarring, the amputation of the longitudinal scar of the rumen, its edges diverge and are freed from 1/2 to 2/3 of the perimeter of the mucous layer. Into the esophagus is introduced a thick gastric tube, which, after the release of the cylinder of the mucosa from the rubs, freely penetrates the cardia into the stomach. Now it remains only to hide the naked mucous. This is done either by sewing the edges of the dissected scar in the transverse direction (the Gottshtein-Shalimov method), or by using a flap of the stomach bottom (Suvorova's method), which is tightened to the defect.

Tumors of the esophagus are divided into benign and malignant, and each group is divided into a morphological structure into epithelial and non-epithelial neoplasms. Among benign tumors, epithelial squamous polyps and leiomyoma developing from muscle tissue are most often found. Polyps are usually localized either in the upper third of the esophagus, or in its epiphrenic section. Minor polyps. When injuring dense food, a small bleeding can occur, which spontaneously stops and goes unnoticed. With repeated bleeding, patients sometimes note that individual parts of excreta acquire a characteristic black color. If these observations, the patient is to see a doctor (which is very rare!), Then the source of bleeding is specified in the case of esophagoscopy. However, more often the polyps of the esophagus are diagnosed accidentally, when in the gastroduodenoscopy the endoscopist detects polyps that are not connected with the patient's complaints and go beyond the presumptive diagnosis of the patient.

Regardless of the size, location, presence or absence of clinical symptoms, polyps are to be removed. The main motive for their surgical excision is the high risk of malignancy, degeneration into cancer. The possibilities of modern endoscopic equipment allow performing the operation bloodlessly, atraumatically. Despite the fact that the intervention is performed under local anesthesia and lasts, as a rule, no more than 15 minutes, it is impossible to perform ambulatory manipulation. The patient is in hospital for 1-2 days. Before discharge, it is necessary to carry out the control of esophagoscopy in order to make sure that the postoperative wound does not bleed.

Leiomyomas of the esophagus are less common than polyps. They are massive formations of a soft-elastic consistency of an irregular globular shape. Leiomyomas of foreign age reach large sizes, however, they do not cause an obstruction of the esophagus. Dysphagia with leiomyomas does not always correspond to the size of the tumor. Sometimes a relatively small tumor causes dysphagia due to the formation of persistent spasm of the circular muscles, and a large tumor is asymptomatic and is detected accidentally by X-ray or endoscopy.

Treatment with leiomyomas of the esophagus is only surgical. Thoracotomy, dissection of the mediastinal pleura, secretion of the esophagus, followed by a longitudinal dissection or defibration of muscles. The tumor should be harvested without damaging the cylinder of the mucous membrane, which, unlike the gastric mucosa, usually does not fuse with the tumor and does not ulcerate.

Other non-epithelial benign tumors of the esophagus (fibromas, lipomas, neuromas) are rare. Diagnosis and principles of treatment of these tumors are the same as with leiomyo-max.

CLINICAL TESTS.

1. The patient complains of difficulty swallowing, chest pain, eructation, regurgitation. Radiography with barium contrasting of the esophagus at the level of intersection of the esophagus with bifurcation of the trachea revealed a defect of filling irregular shape up to 2 cm in diameter and a contrast of the contrast medium more than 2 minutes and the lamination of the contents. Formulate a preliminary diagnosis.

A. Esophageal diverticulum

B. Achalasia of the esophagus

C. Chalasia of the esophagus

D. Esophageal Tumor

E. Foreign body of esophagus

2. The patient complains of a burning sensation behind the sternum, accompanied by a pain syndrome. The pain radiates to the back, increases in the prone position and on the left side, is stopped by the intake of alkaline waters. Pain appears after taking fatty, spicy food, with overeating. Hypersthenic. Listed complaints for two months. Formulate a preliminary diagnosis.

A. Reflux esophagitis

B. Achalasia of the cardia

C. Chalasia of cardia

D. Esophageal diverticulum

E. The parasophageal diaphragmatic hernia

3. The patient suffered 30 years of acute hepatitis A and B. Delivered in serious condition. When vomiting comes with liquid blood and clots full mouth. Blood pressure 80/40 mm Hg. Art. Pulse 108 in min. Accepts corticosteroids. Zhi-here is enlarged, painless. There is a "liver" odor from the mouth. Identify the most likely source of blood flow:

A. Varicose veins of the esophagus and stomach.

B. Acute ulcer of the duodenum.

C. Rupture of the cardiac mucosa of the stomach

D. Chronic stomach ulcer.

E. Pulmonary haemorrhage.

4. The patient M., 22 years old, was taken to the reception room and drank an unknown chemical substance for the purpose of suicide. The patient complains of chest pain, vomiting, general weakness. Objectively: the skin and visible mucous membranes are pale, BP is 90/60 mm Hg, the pulse is 95 beats per minute, in the vomit masses mucus with an admixture of blood. What should the surgeon do first?

A. Rinse the stomach with water

B. Assign antispasmodics

C. Carry out infusion therapy

D. Assign hemostatic therapy

E. Give activated carbon tablets

5. A 48-year-old patient entered the clinic 6 hours after the onset of the disease. The condition is heavy. Cyanosis, subcutaneous emphysema on the neck, difficulty breathing, severe pain behind the sternum, BP - 90/60 mm Hg. Pulse 120 in min. On the roentgenogram: left-sided hydropneumothorax. Pain appeared after vomiting in a state of intoxication. What is the most likely diagnosis?

A. Spontaneous rupture of the esophagus.

B. Infringement of diaphragmatic hernia.

C. Perforation of the cardiac ulcer of the stomach.

D. Breakthrough of lung abscess into the pleural cavity.

E. Spontaneous pneumothorax.

6. Instrumental expansion of burn and peptic strictures of the esophagus carries the danger of perforation with the development of purulent mediastinitis and empyema of the pleura. What is the least dangerous method to use when first expanding the stricture to avoid perforation?

A. Dilation of the stricture with a balloon dilator with a stable balloon diameter.

B. Buzhirovanie under the control of an esophagoscope.

C. Buzhirovanie on a metal conductor-string-conductor.

D. Buzhirovanie under local anesthesia blindly.

E. Fluoride-assisted bougie

7. A 38-year-old woman complains of difficulty in passing food through the esophagus, vomiting of unchanged food, night regurgitation (symptom, "wet cushion"), weight loss. Anamnesis about 10 years. In the X-ray examination, achalasia of the cardia of stage IV with "S" deformity of the esophagus was revealed. What is the best treatment for you?

A. Operation of extra-mucosal esophagocardiomyotomy with plasty of the stomach bottom.

B. Cardiac dilatation with a rigid Stark dilator.

C. Cardiodilating with balloon dilator.

D. Operation of esophagogo-fundoanastomosis according to Gayrovsky.

E. Resection of cardia with esophagogastroanastomosis.

8. A 52-year-old patient entered the clinic complaining of complete obstruction of the esophagus, salivation, general weakness, T-38.7. Dysphagia lasts for 8 days. This happened after I swallowed a piece of meat with bone. With x-ray-noscopy, barium is retained at the level of the middle third of the esophagus. In fibro-esophagoscopy, a spiked bone, hyperemia and edema of the mucous membrane covered with fibrin were detected. What is the best treatment tactic in this case?

A. Surgical treatment: thoracotomy, esophagotomy, removal of foreign body (bones), suturing of food-and-gastrointestinal tract.

B. Endoscopic removal of a foreign body through a rigid esophagoscope.

C. Pushing a foreign body into the stomach with a bougie.

D. Removal of a foreign body with the help of a probe, "Fogarty"

E. Removal of a foreign body with a fibroendoscope.

9. The child is 14 years old. Complains of a feeling of heartburn, which is worse after consuming fatty and fried foods, belching. With fibrogastroscopy, there is hyperemia of the distal esophagus. What diagnosis is possible?

A. Reflux esophagitis

B. Chronic cholecystitis

C. Peptic ulcer disease

D. Chronic viral hepatitis

E. Chronic pancreatitis

10. Patient K. complains of heartburn and constant pain behind the sternum. When the body tilts anteriorly after eating, there is regurgitation. X-ray examination revealed a sliding cardiofundal throat of the esophageal aperture of the diaphragm with placement of the cardia and the bottom of the stomach 8 cm above the diaphragm. With esophagoscopy, there are signs of reflux esophagitis. What tactics would you choose to treat this patient?

A. Surgery operation

B. Conservative treatment in a polyclinic

C. Conservative treatment in a therapeutic hospital

D. Conservative treatment in a surgical hospital

E. Sanatorium treatment

References.

Literature:

1.Общая хирургия. – Зубарев П.Н.; Кочетков А.В. – 3е издание, 2011г.

2.Общая хирургия.- Гостищев В.К. – 2002г.

3.Курс лекций по общей хирургии. – Сушков С.А. -2002г.

4.Практикум по курсу общей хирургии. – Зубарев П.Н. – 2004г.

5.Этюды желудочной хирургии. – Юдин С.С. 2003г.