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GASTRODUODENAL BLEEDING ULCER ETIOLOGY

Tutorial

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The manual covers etiology, pathogenesis, classification, modern methods of diagnosis and treatment of gastroduodenal bleeding ulcer etiology.

The manual is intended for students on specialities: "medicine", "Pediatrics", "medical-prophylactic», «Stomatology».

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LIST OF ACRONYMS

HELL-blood pressure

AIC-argonoplazmennaja coagulation

IVL-ventilation

IRK-index recurrence of bleeding

BCC-circulating blood volume

CVP central venous pressure

ChDD-frequency of respiratory movements

HEART RATE-heart rate

EXAMINATION-esophagogastroduodenoscopy

HP-Helicobacter pylori

INTRODUCTION

The most common cause of acute hemorrhage of upper gastrointestinal tract Division-disease hospital of stomach and duodenal ulcers, accounting for about 45% of bleeding. In the Russian Federation peptic ulcer suffers about 1.7-5% of the population, and the number of patients with bleeding from chronic stomach ulcers i12-perstonoj gut is 90-160 persons per 100000 population and has a distinct tendency to increase. In the structure of complicated forms of ulcers gastro-intestinal bleeding accounted for 40-47%.

Men have ulcerative gastroduodenal hemorrhage occur in 2.5-3 times more frequently than women.

Treatment of ulcerative gastroduodenal hemorrhage is now the problem of emergency surgery.

Despite progress in methods of diagnosis tool, expanding arsenal of Therapeutics and surgical interventions stable remains the overall mortality (about 10%), in the event of recurrence of bleeding frequency adverse outcomes reaches 15 and 40%-postoperative.

The introduction of new technologies and discoveries have significantly improve the results of treatment in patients with bleeding disorders ulcerous. modern methods have significantly change the strategy of treatment of patients. A particular problem is a treatment of elderly and senile age, suffering from severe concomitant pathology.

The purpose of the study topics:

The student must learn to recognize clinically ulcerous gastroduodenal bleeding, to appoint necessary researches, conservative treatment, identify indications and type of surgical intervention.

To enter, you need to know:

Clinical Anatomy and physiology of stomach and duodenal ulcers, particularly their blood supply and innervation;

causes of ulcers stomach and duodenal ulcers, bleeding gastroduodenal classification, the severity of the clinical manifestations of blood loss, bleeding;

obshheklinicheskogo methods and instrumental examination of patients; differentiate ulcerous hemorrhage from gastroduodenalnyhkrovotechenij different etiology.

To enter, you need to understand:

Pathogenesis of common and local irregularities that occur during a peptic ulcer, ulcer bleeding;

principles of conservative and endoscopic correction of ulcer bleeding;

the healing essence of vagotomy, drainage operations, stomach resection.

To enter you must be able to:

Gather the complaints and history;

plan and conduct a survey of patients with ulcer bleeding;

analyze the information received;

identify the indications for appropriate treatment in each case of ulcer bleeding.

HISTORY OF THE STUDY OF GASTRODUODENAL BLEEDING

ULCEROUS ETIOLOGY

The first description of acute gastro - intestinal bleeding belongs to Peru of Hippocrates, Galen, Celsus and Avicenna first described bleeding and only subsequently - ulcers disease stomach and duodenal ulcers first same stomach ulcers as a source of bleeding profuznogo, which caused the death of a patient, described in goduLittre 1704 (Littre). the first systematic description of peptic ulcer and its complications, primarily - bleeding, was outlined in "Udenom Fyodor Academic readings on chronic diseases" in the year 1816.

Development of gastric surgery (V.l. basses, 1842; LjudvikRidiger (LudwikRydygier, 1882) served as the basis for the pervyhpopytok stop c gastro-kishechnoekrovotechenie operational by. In 1880 g. AntonJejzelsberg (AntonvonEiselberg)- a prominent Austrian surgeon, a disciple of Theodore Bilrota first performed excision and suturing krovotochashhejjazvyzheludka formed holes. In 1882 d. Van Cleef (vanKleef) first produced stomach pyloric Department of uspeshnujurezekciju with issecheniemjazvy, complicated by bleeding. G. Finsterer (h. Finsterer) from 1918, actively develop problemyostryh gastroduodenalnyhkrovotechenij, to the 1931 they were operated on 93 patients with lethal 20.4%.

S.s. Yudin and B.a. 1930 Petrov g. steel putaktivnoj surgical tactics in acute gastroduodenal ulcer bleeding. In December 1952 g. Weinberg (Weinberg) first vypolnilorganosohranjajushhuju operation-topstitching festering receptacle and piloroplastiku with vagotomiejprijazvennyhgastroduodenalnyh bleeding in October 1967, was executed the truncal vagotomy with piloroplastikojpo Geynike-Mikulichu and excision krovotochashhejjazvy, heralded organosberegajushhej surgery ulcerative gastroduodenal hemorrhage.

In recent years, endoscopic hemostasis and prevent its recurrence is the main therapeutic tactics of treatment of ulcerous ulcer bleeding. Developing pharmacotherapy has created medications safely reduce acidity in the stomach.

ANATOMY, PHYSIOLOGY OF STOMACH AND DUODENUM

The stomach is located in the left half of the upper floors peritoneal cavity, and only output the Division it is located to the right of the median plane of the body. The front abdominal wall he projected in the area of the left hypochondrium and epigastrium. In the stomach are distinguished kardialnuju part (kardiju), bottom, body, antralnyj Division and piloricheskij channel. Gatekeeper is the boundary between the stomach and the duodenum.

Ligaments surround the stomach with a solid ring and play an importantrole in its fixation. Per bundles between listkamibrjushiny enclosed fat tissue, blood and lymph vessels, lymph nodes and nerve branches. Distinguish following ligament (fig. 1 ). Hepatic-intestinal ligament (lig. (h) epatogastricum), is a dublikaturubrjushiny, stretched between the gate Cook small curvature of the stomach; on the left it goes to the abdominal esophagus Division, spravaprodolzhaetsja in renal and hepatic dvenadcatiperstnujusvjazku. Both of these bundles make up malyjsalnik (omentumminus). In the upper division of ligament pass hepatic branches of anterior vagal trunk. At the base of this ligament lies in some cases left gastric artery accompanied by an eponymous Vienna, more often however these vessels lie on the wall of the stomach along the curvature.

|  |
| --- |
|  |
| Fig. 1. Bundles of the stomach, *and* is the anterior surface; *B* -back*1* — the digestive pancreas bunch; *2* -privratniko-pancreas bunch; *3* —Gastro-diaphragmatic bunch; *4* -gastro-selezenochnaja ligament; *b* -gastro-obodocnaya ligament; *6* — pechenern-duodenum bunch; *7* -hepatic-intestinal bundle (Atlas Vojlenko V.n. et al., 1965). |

Gastro-diaphragmatic ligament (lig. gastrophrenicum), is located to the left of the oesophagus, stomach and bottom diaphragm between left bundle goes into superficial piece of gastro-splenic ligament, and to the right is a semicircle in front of the esophagus. Gastro-selezenochnaja ligament (lig. gastrolienale) stretched between the bottom of the stomach and the upper part of large curvature and the gate of the spleen, is below the gastro-diaphragmatic ligament. Continuing inferiorly, it goes into the gastro-into a bunch. Gastro-obodocnaya ligament (lig. (g) astrocolicum) is the first division of the large seal and is located between the large curvature of the stomach and transverse colon the rectum.

The digestive pancreas ligament (lig. gastropancreaticum), located mezhduverhnim edge of the pancreas and cardiac part of, as well as the bottom of the stomach. Privratniko-pancreas ligament (lig. pyloropancreaticum), in the form of dublikaturybrjushiny stretched between the privratnikomipravoj part of the body of the pancreas. Brjushinnye slips of the ligaments surrounding the stomach, moving to the front and zadnjujustenki, so the stomach is covered with brjushinojpochti completely. Only along the small and large curvature, as well as the stretch back stenkizheludka in the area of the bottom, and sometimes the Cardia peritoneal neimeetsja cover.

Arterial blood supply to the stomach and duodenum are obtained from branches of splanchnic trunk. Vessels of the stomach, anastomoziruja with each other and with branches of the superior mesenteric artery, form an extensive network of vnutristenochnyh vessels, making it difficult for spontaneous stopping bleeding. Veins correspond to the location of the arteries. They are tributaries of the portal vein. Venous Plexus in the podslizistom layer of the Cardia connects System Portal vein from the bottom of the hollow Vienna, forming a natural portokavalnyj anastomosis.

The lymph occurs when the lymphatic pathways accompanying vessels of the stomach.

Innervation gastric vagus and branches carried out the sympathetic nerves that make up the intramuralnye nerve plexus in podslizistom, mezhmyshechnom and podseroznom layers.

More often than not (75-90% of cases) wandering nerves include the abdominal cavity in the form of two shafts-left (front) and right (rear). The left vagus nerve in 2/3 cases is presented as a single stem, 1/3 — in the form of 2 or more branches, which are typically located on the front surface of the ventral part of the esophagus with slight deviations from the mean and and line and to the right or to the left, and very rare (2% of cases ) is on the back surface of the esophagus to the left. Slightly higher cardiac stomach or n and its level from the trunk of the left vagus nerve group two branches: the liver and stomach.

The main trunk of BGN on the vagus nerve, usually good about visible, continues under the front leaf bryushyn s small omentum along the curvature of the stomach at a distance of 1-2 cm from it and is called the anterior nerve Latarzhe. Throughout from him depart gastric branches to the cardiac part and anterior wall of the gastric body. He and neanastomozirujut among themselves, and each branch has limited zones near the innervation. It should also be remembered the presence of recurrent branches starting in place of occurrence of nerve Latarzhe in the stomach wall and rising along its curvature. The right vagus nerve and always in the form of a single, Bole e Tolstoy than the left vagus nerve, the barrel is located more frequently on the back surface of the esophagus, is closer to the right edge, but it can be and to the rear of the esophagus at 1-2 cm between the aortoj and right leg aperture . From the main trunk of the vagus nerve also depart two types of nerve branches: the chrevnomu Plexus and to the stomach. Branches of the vagus nerve to the antralna part of the stomach, 30% case can be individual, to depart from the trunk or hepatic branches and placed in small intermediate. In addition, the antralna part of the stomach leaving t sprigs from the nerves, accompanying the descending branches of the left gastric artery. In most cases, between branches of the vagus nerves has multiple e anastomoses.

The duodenum is skirted by the head of the pancreas. At the Trejtca ligament forms a dvenadcatiperstno-toshhekishechnyj bend. The length, duodenum is equal to 25-30 cm. It distinguishes the top horizontal downward, the lower horizontal and ascending part. The posteromedial wall descending part is major duodenal papilla-confluence in the gut of the common bile duct and pancreatic duct.

Brjushinapokryvaet duodenum unevenly. The upper part of her stripped brjushinnogopokrova only in the area of zadnenizhnej poluokruzhnostistenki, gdekishka in contact with the head podzheludochnojzhelezy, Portal Vienna, General bilious protokomi Gastro-duodenal artery. initial otdelkishki lies mezoperitonealno. The zhesleduet noted relative to the ascendant chastikishki. Top-down and bottom have only brjushinnyjpokrov the front and so raspolagajutsjazabrjushinno. fixation of duodenal ulcers osushhestvljaetsjasoedinitelnotkannymi fibers extending from the her wall to zabrjushinnogoprostranstva bodies. A significant role in fiksaciidvenadcatiperstnoj gut plays the peritoneum covering the colon in front, as well as korenbryzhejki of the transverse colon. Additionally, for fixing the gut has a value of soedinenieee with the head of the pancreas.

The blood supply is carried out by chetyrmjapodzheludochno dvenadcatiperstnojkishki-dvenadcatiperstnymi arteries. Lymph vessels, efferent lymph from dvenadcatiperstnojkishki, located on the front and nazadnejpoverhnostjah pancreatic head cancer. Distinguish between front and rear podzheludochno-duodenal tuberculosis.

Innervation of the dvenadcatiperstnojkishki is carried out branches idushhimiot splanchnic, upper bryzheechnogo, pechenochnogoi renal plexus. The nerve branches, voznikajushhieiz these plexuses are sent to vdolverhnih and lower podzheludochno-dvenadcatiperstnyh arteries, as well as independent vessels to otjetih dvenadcatiperstnojkishki.

Stomach not only provides physical and chemical processing of food, but also takes part in the interim sharing gemopojeze (allocates internal factor Castle, only in the presence of vitamin absorption in12), maintenance of water- electrolyte and acid-balance.

The gastric mucosa is unique: its glands produce 2-3 liters of gastric juice per day. In all departments of stomach mucosal surface is lined by a single layer of cylindrical epithelium, the cells which secrete "visible mucus"-sticky liquid gelatinous consistency, consisting of neperemeshivajushhegosja layer of mucus, bicarbonate , phospholipids and water. Superficial cells of the mucosa along with muco-bikarbonatnym gel creates physical-chemical protective barrier, preventing backward diffusion hydrogen cations from the stomach cavity and supports the neutral pH at the cell surface. In maintaining sustainability of the mucous membrane of the stomach and duodenum to povrejdatm factors play an important role: the ability of cells to reparations, good condition of microcirculation and secretion of chemical mediators (prostaglandins, protection epidermal and transformirujushhijfaktory growth).

Gastric juice is capable of damaging and digest the living tissue due to the presence in it of HCl and pepsin. In the stomach of a healthy person aggressive properties of acid-pepticheskogo factors of gastric juice weakened action adopted food swallowed saliva sekretiruemoj alkaline mucus, stomach zabrasyvaemym alkaline duodenalnymsoderzhimym and influence of inhibitors of pepsin. Tissue of the stomach and duodenum are protected from samoperevarivanija protective muco-bikarbonatnymbarerom, integrated system of mechanisms enabling and inhibiting the secretion of gastric motility and HC1, duodenal ulcers.

Antralnyj Division stomach, depending on its pH content adjusts products HCl eye cells.

The flow of acid content of the stomach into the duodenum stimulates the endocrine function S-cells. At pH less than 4.5 released into the intestine SECRETIN inhibits HCl secretion, stimulates the excretion of bicarbonate and water the pancreas, liver, (brunnerovymi) with duodenal glands. When the neutralization of HCl alkaline duodenal cavity the secret raises the pH, it stops the release of SECRETIN and resumes the secretion of HCl. "sekretinovyj braking mechanism".

Bottom and body of the stomach is carried out mainly by the reservoir function and gastric digestion, and the main function of the piloroantralnogo Division — mixing, grinding and evacuation of the contents into the duodenum.

Duodenum before her gastric chyme several expands due to relaxation of the muscles of her walls.

Thus, the evacuation of the stomach contents due to precedence cuts intracavitary pressure and changes in the antrum, piloricheskoj part and the duodenum. Antralnyj and Division gatekeeper regulation provide the duration of food digestion in the stomach. Thanks to the action of zamykatelnogo duodenal contents reflux prevented apparatus in the stomach.

Wandering nerves stimulate Peristaltic stomach reduction, lower the tone of the pyloric sphincter and lower esophageal sphincter. Sympathetic nervous system has the opposite effect: slowing irritative and increases tone sfinkterov. Normal secretory and contractile function of the digestive system provides interaction mediators endings of the vagus nerves (acetylcholine), biogenic amines (histamine, cholecystokinin, SECRETIN, etc.), fat-soluble acid ( Prostaglandins).

In the duodenum is done digesting all food ingredients, it regulates the functions of the Hepatobiliary system and pancreas, secretory and motor functions of the stomach and intestines. Gastric chyme in the duodenum is subjected to further mechanical and chemical processing. Digestion occurs all food ingredients, amiloliticheskimi lipoliticheskimi and proteolytic enzymes.

CLASSIFICATION OF BLEEDING FROM THE UPPER DIVISION

GASTRO-INTESTINAL TRACT

***Etiology***

I. nature of peptic ulcer:

1. stomach ulcer;

2. duodenal ulcer.

II. Non-ulcer of nature:

1. Mallory syndrome - Weiss;

2. varicose veins of the esophagus and stomach;

3. acute erosive stomach and duodenal ulcers (secondary ulceration of medicinal or stress).

***Particular source of ulcer bleeding***

I. gastric ulcer (Johnson):

1. mediogastralnaja (the body of the stomach);

2. concomitant with duodenal ulcer;

3. prepiloricheskaja or pyloric Canal.

II. Duodenal ulcer.

III. Combination with other complications of peptic ulcers (perforation, stenosis, penetration).

IV. The recurrent ulcer after operations on the stomach.

***The severity of bleeding***

(I) . Easy.

Ii. Secondary

Iii. Heavy.

***Characterization of a source of bleeding according to endoscopy and jehosonografii***

(I) Continued.

Ii. Ostanovivshheesja:

1. high threat of recurrence;

2. low threat of recurrence.

***By size of ulcers:***

(I) Small (up to 0.5 cm)

II. average (0.6-1.5 cm in the stomach and 0.6-1.0 cm in the duodenum)

III. Large (1.6 -3.0 cm in the stomach and 1.1-2.0 cm in the duodenum).

IV. Giant (more than 2.5 cm in the stomach and over 2 cm in the duodenum).

ETIOLOGY, PATHOGENESIS OF GASTRODUODENAL BLEEDING ULCER ETIOLOGY

Ulcers disease stomach and duodenal ulcers-heterogeneous, chronic, with varying frequency, recurring disease with different currents and progression, characterized by the formation of the ulcer of the Mucosa Shell and podslizistogo layer due to local inflammatory-necrotic process in violation of intragastralnyhfaktorov balance of aggression and protection.

The progression of the ulcerative process naturally leads to isolated or combined of peptic ulcer disease complications as hemorrhage, perforation, penetration, stiff - ulcer, stenosis of malignization. Peptic ulcer disease is primarily chronic and occurs as a result of a combination of activation jazvoobrazujushhih factors and reduce the activity of protective factors (table 1).

Leading role assign aggressive endogenous acid-pepticheskomu factor. The beginning of it is hydrochloric acid, which has a separate damage effect on the mucous membranes and serves as a powerful activator of proteolytic activity of pepsin in the inactive form the principal cells. When ulcers duodenal ulcer is significantly improved formulation of hydrochloric acid.

Factors that stimulate the pepsina and hydrochloric acid at the same time stimulate and mucus secretion. Mucus is a special subclass of glycoproteins and mucins, which serves as a barrier, protecting the underlying epithelial cells from adverse impacts.

*Table No. 1*

Factors of aggression and protect the mechanism of jazvoobrazovanijapo

Vladimir Stupin et. (2000).

|  |  |
| --- | --- |
| Factor of aggression | Sun protection factor |
| Over-production of hydrochloric acid and pepsin  | Adequate oshhelachivajushhaja antrum of stomach Division function |
| Tissue hypoxia, impaired micro circulation ischemia of gastric mucosa  | Adequate blood flow of gastric mucosa |
| Invasion Nelicobacterpylori  | Normal local immunity, secretion lizolecitina, Iga, IgM, prostaglandins |
| Violation of gastroduodenalnojmotoriki (patologicheskijduodeno-gastralny reflux, gastric evacuation violations)   |  Antroduodenalnyj acid brake (ingibiciikisloty mechanism in the duodenum)  |

Mechanism for protecting mucous barrier from acid - peptic aggression is that it reduces the backward diffusion active n - ions in the presence of sialic acid and inactivate pepsin.

An important role in strengthening the aggressive properties of gastric contents and weakening the protective properties of the mucous membrane of the stomach and duodenum play microorganisms Nelicobacterpylori. these micro-organisms reveal more often in patients with ulcers duodenum and rarely in patients with gastric ulcer. Species of the genus Nelicobacterspp. are the only ones known to date, microorganisms, capable of long survive in extremely acidic contents of the stomach and even colonize its mucous membrane. An important role in the virulence of bacteria and its ability to survive in the acidic contents of the stomach plays a secretion of the bacterium urease-enzyme, riving urea with the formation of ammonia, which neutralises hydrochloric acid in the stomach and provides bacteria local to maintain comfortable for her Ph (about 6-7).

Pathogenetic role of Nelicobacterpyloriv ulcerogeneze explain the ability of a microorganism to colonize piloroantralnyj Division of gastric mucosa and cause pockets of gastric metaplasia in the duodenal bulb. Mechanisms through kotoryhNelicobacterpyloriinduciruet inflammatory response and damage of the choroid, not fully explored. As a major treat three mechanisms. In-thefirst induction of inflammatory response related to the release of toxins Nelicobacterpylori incentives to attract inflammatory cells and damage their mucous membrane epithelium;- Second, with direct damaging effect of bacteria on the jepiteliocity and expression of chemotactic factors; in-third, with a response of the immune response of the body.

Despite the link helikobakternogoantralnogo gastritis with duodenal ulcer, mechanisms of ulcerogenesis that begins in causing chronic ulcers remain unclear.

Despite his alleged role Nelicobacterpylori in the pathogenesis of peptic ulcer, it is impossible to give her a leadership role in the cause of the disease. Ulcerative defect occurs only when there is a complex of pathogenetic mechanisms: gipersecretii hydrochloric acid and enhancing proteolytic functions, gipermotorikiantruma, State ofmuco-bikarbonatnogo barrier and Microcirculation in the gastric mucosa, etc.

Kislotoproducirujushhaja the function of the stomach is governed by a complex and closely interrelated system neuroendocrine mechanisms. Coating cells are experiencing nejrokrinnoe and endocrine impact. Nejrokrinnajareguljacija is carried out via the most direct and a shorter path through the nerve cells and sinapticheskie communication and humoral regulation involves the free flow of biologically active agent into the bloodstream with subsequent selective its impact on highly sensitive receptors specialized cells-targets through the vagus nerve stimulation occurs gastrinproducirujushhih cells stomach Department the antrum and thereby manifests a direct relation to humoral regulation of secretion.

In the elderly increases aggressive role violations of gastroduodenal motility. One of the manifestations of these factors of aggression serves biliary reflux. Patologicheskijduodenogastralnyj reflux occurs in 45% of patients in old age.

Hereditary burdenedness to peptic ulcer disease is now seen as a predisposition that is implemented in the disease only if additional unfavorable reasons.

In the pathogenesis of festering "secondary (symptomatic) ulcers are important stress factors. As a result of stimulation of the pituitary and adrenal function in the body undergoing hormonal shifts, resulting in increased gastric secretion, changes of Microcirculation in the mucosa of the stomach and duodenum. In some cases, bleeding from ulcers and gastric duodenal acute occur when extensive burns (Kurlinga ulcers), brain lesions after intracranial surgical interventions (Cushing ulcer), other diseases of cardiovascular and respiratory system, liver, severe intoxication, injury. Welcome to "ulcerogennyh" drugs (anticoagulants, corticosteroids, nonsteroidal anti-inflammatory drugs, etc.) can cause symptomatic bleeding ulcers.

When ulcerative bleeding platelets attach themselves to the collagen in the basement membrane area defect of the receptacle and form platelet thrombus, which alone can ensure that stop bleeding for a few hours, but then the thrombus breaks down, if not compacted filaments of fibrin. Low pH in the stomach greatly increases the time of formation of the bunch. Gastric juice not only violates the education of fresh blood clot, but also accelerates its destruction.

The basis of recurrence of ulcer bleeding has progressive ischemic necrosis in periulceroznoj area on the background of local hypoperfusion. The basis of ischemic nekrobioza and necrosis is oxidative stress with increased perikisnogookislenija processes and insufficient tissue system of antioxidants.

CLINICAL PRESENTATION AND DIAGNOSIS OF GASTRODUODENAL BLEEDING ULCER ETIOLOGY

Source of bleeding ulcers can be arrozirovannye vessels of various diameter, located in the bottom of the sores and ulcer edges of the crater, diffuse bleeding due to inflammatory and destructive changes to the body wall.

Most often arise from massive bleeding ulcers, which are located on the posterior wall duodenal ulcer, krovosnabzhaemojgastroduodenalnoj artery and of high curvature ulcers stomach, left gastric krovosnabzhaemoj artery.

Recurrent peptic ulcer after resection of zheludkachashhe located on the scrawny gut gastroenteroanastomosis goals.

The reaction of the patient blood loss depends on the intensity of the bleeding. Have the value of the initial state of the patient and the reaction to blood main organism systems. Giperkoaguljacionnaja phase DIC-syndrome and Microcirculatory occur in every patient with clinically significant bleeding.

Rapid blood loss (approx. 500 ml) can lead to collapse. The most pronounced symptoms occur in acute massive bleeding, when for a short time a patient loses more than 1500 ml of blood, or about 25% in such cases, the Bcc. the clinical picture corresponds to gemorragicheskomu shock, the patient may develop acute multiple organ dysfunction syndrome and gipokoaguljacionnaja phase of DIC- syndrome.

Bleeding from the ulcer is characterized by 3 major symptoms: bloody vomit, degteobraznym Chair and general symptoms of blood loss.

Clinically distinguish two periods of ulcer bleeding. The latent period begins with receipt of the blood in the stomach or duodenum and common signs of blood loss-fainting, tinnitus, dizziness, weakness, cold sweat, increase pulse and falling blood pressure. The duration of this period varies from a few minutes to several days.

Period expanded clinical picture begins with the appearance of vomiting blood content of type "coffee grounds" (gematomezis) or degteobraznogo black stool (Melena).

When bleeding vomiting typically has color "coffee grounds". This is due to the fact that hemoglobin in the blood, available once in the stomach reacts with hydrochloric acid to form gematina chloride, which has a blackish-brown. This is an important sign, but not absolutely reliable.

If massive bleeding occurs in the vomitus might be reporting impurity unchanged blood kakhimicheskaja reaction can not make it happen.

A sign of bleeding can be tarry stool. This is due to the fact that hemoglobin into the intestines, forming compounds of iron, which paint a fecal mass in black color. This sign in the same way as vomiting color "coffee grounds" is not a absoljutnodostovernym. With abundant and fast bleeding does not happen chemical reaction, and then the fecal mass will have the impurity of the blood (red or dark red). Some medications (activated carbon, drugs bismuth, iron) and food (bird cherry, BlackBerry, black currant) can give degteobraznoe staining.

Common symptoms of acute blood loss depend on the amount and speed of bleeding. General symptoms may vary from case to case: from the light symptoms of malaise that are general weakness, dizziness, mild nausea, dry mouth, shortness of breath, a yawn, darkening the eyes, poznablivaniem, to heavy until the State of shock with a fall in blood pressure and loss of consciousness.

The patient, admitted to the Emergency Department with signs held or continued bleeding, must be examined by the duty surgeon in the first place. Patients able to hemorrhagic shock with suspected held or continued bleeding gastroduodenal hospitalize immediately in intensive care or operating, bypassing the reception area. In other cases, the patient survey produce at the front.

Physician staff conducts a survey of the patient, determining the severity of his condition and physiological status, figuring out medical history. In doing so, hold the full amount of available laboratory examination.

Data physical researches allow to judge the severity of the bleeding. When mild-deficit globular volume (TH) of less than 30% of the overall patients satisfactory either moderate, hemodynamic indices within normal limits or vary moderately, vomiting and Melena are rarely repeated .

Condition, sputannoe consciousness, sudden paleness, frequent filling and weak pulse voltage and pulse, lower blood pressure, as well as detection of rectal study black liquid stool mixed with blood the contents are signs of acute massive bleeding (deficit TH blood more than 30%).

Survey of the patient required complete finger study of rectum and then perform sensing.

Diagnostics must reply to osnovnyevoprosy: what was the source of bleeding is bleeding; and what are his pace;

What is the severity of suffering a bleeding.

*Laboratory Diagnostics :* General blood analysis (determination of soderzhanijajeritrocitov, hemoglobin and hematocrit); biochemical blood analysis (glucose, amylase, bilirubin, creatinine, total protein), opredeleniegruppy blood and Rhfaktora, kardiolipinovajaproba (blood on the RW) duration of bleeding isvertyvaemost, Petit (prothrombin on prothrombin ratio determination, INR), urine test (physicochemical properties, sediment microscopy).

Lower hemoglobin, reducing the number of erythrocytes, hematocrit reduction, leucocytosis Orient attitude gravity blood loss, but in the early hours from the start of bleeding these indicators vary. The true severity of anaemia is becoming clear only poproshestvii days and more on the background of the intravascular volume recovery due to hemodilution at the expense of extravascular fluid.

Study of circulating blood volume (CBV) and its components allows you to more accurately determine the amount of blood loss. Among the ways to determine the BCC uses simple techniques using normogramm, the definition of a globular volume of largest gematokrita and hemoglobin level.

G.n. Karabanovym technique of defining deficit of BCC, based on determination of the viscosity and hematocrit. Deficiency of Bcc (DOCK) calculated from the formula:

DOCK = 1000xr + 60x, rather than approving-7040 for men and for women, 6720-gder-viscosity in units; Rather than approving-hematocrit%.

A.t. et Staroverovoj. recommended way of incorporating a definition of globular volume with subsequent calculation of the Bcc and the volume of circulating plasma:

TH = (+0.615 x +0, rather than approving 11.08, 0354hNb)-0.254 XP;

where is the volume of circulating blood in 1 ml per 1 kg of body weight; Rather than approving-hematocrit in%; HB-haemoglobin in g/l; R-body weight in kg.

For orientirovochnojocenki the severity krovopoterimozhno count Algovera index-Burri, or, as it is called, shock index-otnosheniechastoty pulse in 1 min to sistolicheskogoarterialnogo pressure (BP). And the higher the figure, the tembolshaja danger threatens the life of the patient. If there is no deficit of BCC shock index equal to 0.5. Each subsequent increase of 0.1 corresponds to 200 ml of blood loss, or 4% of the Bcc. Method for weight categories of patients from 60-80 kg. Bcc (approximate) is determined by comparing stun target index and body mass index (table 2).

This technique is available for every doctor. The validity of its compensatory possibilities depend on the cardiovascular system, so can only serve to orientirovachnoj estimate blood loss at the initial stage of the examination of the victims. Shock index is not informative when gipertenzivnom syndrome.

The severity of patient's condition accurately characterize some hemodynamic parameters (central venous pressure CVP, the parameters of Central hemodynamics) values that characterize the transportation of oxygen (oxygen partial pressure PO2, minute oxygen transport), metabolism (electrolytes, acid-base state-KHS plasma osmolarity, etc.) that allow you to create a program of intensive therapy. Blood loss can lead to gipokoagulyatsii with change of time of blood clotting, lowering of the level of prothrombin and Fibrinogen.

*Table No. 2*

Definition of blood loss on indicators of hemodynamics

|  |  |
| --- | --- |
|  Shokovyjindeks |  Blood loss, l |
| Bcc,% | When body weight, kg |
| 60 | 70 | 80 |
| 3.02.52.01.51.0 | 5550403018 | 2.32.11.91.60.8 | 2.72.52.21.91.0 | 3.12.82.52.11.1 |

*Intensive care Department.* The main objectives of the intensive therapy are filling fluid losses blood and hemodynamic stabilization. Filling the BCC should begin with an introduction kristalloidnyh solutions through two-three peripheral catheter or central catheter the fastest connection infusion of Colloids. At the same time carry out diagnosis of hemorrhage, blood loss, determine the value of spend esophagogastroduodenoscopy (ESOPHAGOGASTRODUODENOSCOPY).

Jekstrennajajezofagogastroduodenoskopija is the leading method of diagnosis, provides verification of endoscopic faktakrovotechenija and identification of its source, endoscopic evaluation of the degree of aktivnostikrovotechenija. Recommended performing EXAMINATION within the first two hours of hospitalization. Before the endoscopy rekomenduetsjavyvedenie gastric tolstymzheludochnym gastric lumen, laundering probe "to clean water. According to the introduction of erythromycin (effective prokinetik) at a dose of 250 mg per 30 minutes before EXAMINATION considerably povyshaetinformativnost research. Antiulcer therapy (proton pump vvedenieingibitorov bolusnoe in a dose of 80 mg) is recommended start before an emergency if necessary, GASTRODUODENOSCOPY. can bytvypolnena under jendotrahealnym anesthesia.

To characterize the source of bleeding ulcer and threat of recurrence of use classification Forrest (ForrestJ a., 1974):

I — continued at the time of osmotrakrovotechenie:

• IA-Jet bleeding

• IB-diffuse bleeding

(II) is stationary on the time osmotrakrovotechenie:

• IIA is visible in the bottom of the vessel in the form of ulcers stolbikaili tubercle

• IIB is tightly fixed to the bottom of the sores thrombus-clot (not smyvaemyj tap)

• IIC — melkotochechnye vessels in bottom of ulcers in videtemnyh (red) stains

III-defect mucous membrane without priznakovkrovotechenija

Endoscopic recidivakrovotechenija risk assessment. Signs of significant risk recidivakrovotechenija: large trombirovannyesosudy, fresh loose clot, signs of active jazvennogoprocessa (podrytye edge, the presence of necrosis, contact bleeding), giant ipenetrirujushhie ulcers.

Signs of reducing the risk of recurrence of bleeding: NET belt conveyor pelletizing ulcer phenomena kraevojjepitelizacii.

When you stop the bleeding by endoscopic resuscitation are dynamic monitoring hemodynamics. Blood pressure before fully endoscopic or surgical bleeding must hold at subkriticheskihdlja particular patient numbers.

Indication for transfusion could begin Wednesday jeritrosoderzhashhih in the treatment of acute blood loss anemia with developed critical provides indicators of the blood: hemoglobin 65-70 g/l; Hematocrit 25-28%; amount of blood lost 30-40% of Bcc. At deficiency of coagulation factors is shown frozen plasma transfusion. When hypoxia shows oxygen therapy. To temporarily maintain O2 delivery you can use tissues perfluorane, vnelegochnuju oxygenation. Artificial ventilation (AV) can be shown when unstable hemodynamics, hypoxia and violations of consciousness. Vazopressory showing when inefficiency infuzionno-transfusion therapy. Use them with dofaminom improves renal blood flow imezenterialnyj. Recommended use of antioxidants (reamberin mexidol, allopurinol). Application of serotonin is recommended to improve peripheral circulation and local hemostasis. Criterion for restoration of Microcirculation haemodynamics and recovery should be considered hourly diuresis.

Carrying out resuscitation and diagnostic measures in patients with massive bleeding gastroduodenalnym should take place simultaneously.

When identifying using ESOPHAGOGASTRODUODENOSCOPY continued bleeding from gastroduodenal ulcers, which failed to stop by endoscopic hemostasis, the patient shows surgical treatment on an emergency basis. If successful, the endoscopy gemostaze produce an assessment of the risk of recurrence of bleeding. Identification of further treatment must be based on the likelihood of recurrence of bleeding, an objective assessment of the severity of patient's condition and treatment possibilities.

Relapses bleeding perform repeated EHD attempted endoscopic hemostasis and in its success, depending on the severity of the condition, the patient can operate either as a matter of urgency continue to conservative treatment.

If the threat of repeated bleeding from ulcers more than 50%, then the severity of patient's condition less than 30 points on SAPSII shows the emergency surgery, which perform within 12-24 hours from the moment of receipt and after the maximum available during this time of preoperative preparation.

If the probability of recurrence of bleeding determines a probability of less than 50%, then the patient is subject to conservative treatment with possible planned operation.

Repeated endoscopic examination is recommended for incomplete primary inspection, unstable gemostaze (high risk of recurrence of bleeding), in some cases with recidivist gemorragii.

Rejection of emergency endoscopic Diagnostics can be justified only in patients in agonalnom condition.

X-ray study of vjekstrennoj diagnosis of bleeding in the now vacated by the wayside, it is used after bleeding for further diagnosis.

Angiographic diagnostic method has limited use, it is used in specialized institutions. Using technology for Seldingeru vessels possible catheterization selective or even superselective visualization splanchnic trunk, superior mesenteric arteries and their branches, venous trunks, which is shown in cases of repeated recidivating bleeding When the source of bleeding is not checked endoscopically and x-ray methods.

Clinical examination, laboratory data and instrumetalnye indicators allow you to determine the severity of the bleeding.

**Gravity bleeding** naiboleeracionalnoj is the classification uses 3-power gradation, which secretes mild, moderate and severe degree of bleeding, uchityvajushhiepri this as the amount transferred blood loss, and condition of the patient. classification the severity of bleeding on A.i. Gorbashko (1982) is shown in table 3

*Table No. 3*

Classification of severity of blood loss

|  |  |
| --- | --- |
| Indicators | The degree of blood loss |
| Light | Average | heavy |
| The number of red blood cells | > 3.5 x 10 12/l | > 2.5 x 10 12/l | <2.5 x 10 12/l |
| Hemoglobin, g/l | >100 | 83-100 | <83 |
| Pulse rate per minute | <80 | 80-100 | >100 |
| Sistolicescoe ad, mm. Hg. | >110 | 110-90 | <90 |
| Hematocrit,% | >30 | 25-30 | <25 |
| Deficiency of globular volume,% | <20 | 20-30 | >30 |

**The wording of the expanded diagnosis, examples:** Peptic ulcer disease. chronic (kalleznaja) jazvazheludka complicated ostanovivshimsjakrovotecheniem (Forrest IIA). Blood legkojstepeni.

Peptic ulcer disease. chronic duodenal ulcer complicated ongoing bleeding (Forrest IA). severe blood loss.

Score only the severity of bleeding does not reflect the entire complex changes in the body of patients with different nature and severity of opportunistic infections and various ages. Therefore, together with an assessment of the actual severity blood loss are increasingly using the integrated indicator of the severity of the patient's condition (ARASNE) that allows you to predict the portability of surgical intervention, objectify the choice of the nature of the transaction.

The basic principle of the existing systems and scales is the possibility of a simple adding of individual points to objectively evaluate the condition of the patient.

The world is currently the most popular General clinical systems (scale) APACHE - (II) - (III) and SAPS - (II) - (III) (tables 4, 5, 6, 7, 8, 9, 10.11).

APACHE (AcutePhysiologyandChronicHealthEvaluation)-sistemaocenkiostryhfiziologicheskihnarushenij and chronic diseases is one of the best systems for the assessment of the severity of the condition of the patient (affected). W . (A) . Knaus et al. in 1981 and revised in 1985 (APACHE II) this scale includes a quantitative assessment of the pathophysiological changes caused by the disease (injury), chronic diseases and the age of the patient. This system is based on reproducible measurements of physiological and laboratory variables that carry out at an early stage of patient's stay in intensive care. The sum of the points below moderately corresponds to 11, above 20-critical state. In APACHE-II score can take a patient's size from 0 to 71 points, while achieving the status in 30 points lethality is estimated at least 70%.

*Table No. 4*

Scale APACHE-II

|  |  |
| --- | --- |
| Physiological indicators | Points |
| +4 | +3 | +2 | +1 | 0 | +1 | +2 | +3 | +4 |
| Rectal temperature, ºс | > 41 | 39-40, 9 |   | 38.5 -38.9 | 36-38, 4 | 34-35, 9 | 32-33, 9 | 30-31, 9 | <  |
| Mean HELL, mm Hg | > 160 | 130-159 | 110-129 |   | 70-109 |   | 50-69 |   | < 49 |
| Heart rate per minute | > 180 | 140-179 | 110-139 |   | 70-109 |   | 55-69 | 40-54 | < 39 |
| Frequency of breaths per min | > 50 | 35-49 |   | 25-34 | 12-24 | 10-11 | 6-9 |   | < 5 |
| Oxygenation: a-a0O2 or Ro2, mmHg, if a) Fiabout2? 50% is writtenA-aDO2 b) Fiabout2< 50% | > 500 | 350-499 | 200-349 |   | < 200Ro2> 70 | Ro2> 61-70 |   | 55-60 | Ro2< 5-5 |
| Blood pH | > 7.7 | 7.6 -7.69 |   | 7.5 -7.59 | -7.49 7.33 |   | 7.25 -7.32 | 7.15 -7.24 | < 7.15 |
| Sodium soluble transferrin TKI, mmol/l | > 180 | 160-179 | 155-159 | 150-154 | 130-149 |   | 120-129 | 111-119 | 110 |
| Serum potassium | > 7 | 6-6, 9 |   | 5.5 -5.9 | 3.5 -5.4 | 3-3, 4 | 2.5 -2.9 |   | < 2.5 |
| Creatinine \* syvo rotki (doubled radiowave in acute pochech Noah | > 3.5 | 2-3, 4 | 1.5 -1.9 |   | 0.6 -1.4 |   | < 0.6 |   |   |
| Hematocrit,% | > 60 |   | 50-59, 9 | 46-49, 9 | 35-45, 9 |   | 20-29, 9 |   | < 20 |
| The number of cells, | > 40 |   | 20-39, 9 | 15-19, 9 | 3-14, 9 |   | 1-2, 9 |   | < 1 |
| Glasgow coma scale: point = 15 minus the actual cue point on |   |   |   |   |   |   |   |   |   |

*Table No. (4)*

|  |  |
| --- | --- |
| (A). Fiziologicheskiepokazateli | Points |
| +4 | +3 | +2 | +1 | 0 | +1 | +2 | +3 | +4 |
| A. overall score on a scale of acute Physiology (C ES)-sum of points 12 individual variables FNL3 serum, venous-mmol/l (undesirable; use if no indicators of arterial blood gas)B. Point of ageVozrastBall< 44045-54255-64365-745> 756 | > 52 | 41-51, 9 |   | 32-40 , 9 | 22-31, 9 |   | 18-21, 9 | 15-17, 9 | < 15 |

N. Point of chronic diseases

Each of the diseases in neoperirovannogo or urgently operated patient falls into the following categories, is estimated at 5 points:

1) cirrhosis, portal hypertension complicated or encephalopathy;

2) angina pectoris, functional class IV, or angina;

3) chronic hypoxemia or hypercapnia or eritrotsitoz when pulmonary hypertension > 40 mmHg;

4) permanent peritoneal or hemodialysis;

5) reduced immunity.

Point APACHE (II) = SummaA + B + C

*Table No. 5*

APACHE III Scale

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   |   |   | 8< 39 | 540-49 | HR in min 050-99 | 5 110-119 | 7 120-139 | 13 140-154 | 17 > 154 |
|   | 23 39.9 < | 1540-59 | 760-69 | 6 70-79 | HELL, mmHg0 80-99  |   4 100-119  |   7 120-129 |   9 130-139 |   10 > 140 |
| 20 > 32.9 | 16 33-33, 4  | 13 33.5 -33.9 | 8 34-34, 9  | 2 35-35, 9  | T° C0 36-39, 9 | 4> 40  |   |   |   |
|   |   | 17< 5  | 86-11,IVL  | 7 12-13  | ChDD per min0 14-24  | 625-34   | 9 35-39  | 11 40-49  | 18 > 50  |
|   |   |   |   |   | AaRo2 in Fi02r more than 0.5 mm Hg.0< 100   | 7 100-249   | 9250-349 | 11 350-499  | 14> 500  |
|   |   |   |   | 3< 41 | Hematocrit041-49  | 3> 49  |   |   |   |
|   |   |   | 19< 1  | 51-2, 9 | 109leukocytes/l0 3.0 -19.9 | 120-24, 9 | > 24.9 |   |   |
|   |   |   |   | 3 44.2 | Creatinine, mmol/l0-124 44.2  | 4 125-171 | 7 > 171 |   |   |

*Table 5 (continued)*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15< 0.3 | 8-0.5 0.4 | 7 0.6 -0.8 | 5-1.4 0.9 | 4 1.5 -1.9 | Diuresis, l0 2-3, 9  | 1 > 4  |   |   |   |
|   |   |   |   |   | Urea nitrogen, mmol/l0 < 3.5  | 2 3.5 -3.9 | 7 4-8, 1 | 11 8.1 -16.4 | 12 16.5 |
|   |   |   | 3< 120  | 2 120-134 | NA, mmol/l0135-154 | 4 > 154 |   |   |   |
|   |   |   | 11 < 20 | 6 20-24 | Albumin, g/l025-44 | 4 > 44 |   |   |   |
|   |   |   |   |   | Total bilirubin, mol/l0< 32.5  | 5 32.5 -49.5  | 6 50-84 | 8 85-137 | 16 > 137 |
|   |   |   | 8< 2.1  | 9 2.1 -3.2 | Glucose, mmol/l0 3.3 -10.2 | 311-19, 2 | 5 > 19.2  |   |   |

*Table No. 6*

**Evaluation of acid-base status**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ph/Rso2 | < 25 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-60 | > 60 |
| < 7.15 |  12 |  4 |
| 7.15 -7.19 |
| 7.20 -7.24 | 9 | 6 | 3 | 2 |
| 7.25 -7.29 |
| 7.30 -7.34 | 0 | 1 |
| -7.39 7.35 | 5 |
| -7.44 7.40 |
| 7.45 -7.49 | 0 | 2 | 12 |
| 7.50 -7.54 |   | 3 |   |
| 7.55 -7.59 |
| 7.60 -7.65 | 0 |
| > 7.65 |

*Table No. 7*

**Neurological status**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Reaction | Conscious talk | Matted conversation | Meaningless words and sounds | No reaction |
| Performs a verbal commands | 0 | 3 | 10 | 15 (16) \* |
| Localizes pain | 3 | 8 | 13 | 15 (16) \* |
| Flexion resistance, dekortikatsionnaya | 3 | 13 | 24 | 24 (33) \* |
| Decerebracionnaja rigidity/no reaction | 3 | 13 | 29 | 29 (48) \* |

\* Points in parentheses for patients who do not open his eyes spontaneously or irritation

*Table No. 8*

**Age and chronic pathology**

|  |  |  |  |
| --- | --- | --- | --- |
| Age |   | Chronic pathology |   |
| < 44 | 0 | AIDS | 23 |
| 45-59 | 5 | Liver failure | 16 |
| 60-64 | 11 | Lymphoma | 13 |
| 65-69 | 13 | Metastasis of cancer | 11 |
| 70-74 | 16 | Leukemia/myeloma | 10 |
| 75-84 | 17 | Immune deficiency | 10 |
| > 85 | 24 | Cirrhosis | 4 |

*Table No. 9*

|  |  |
| --- | --- |
| Pathology | Coefficient |
| Neoperirovannye patients |
| Cardiovascular pathologyCardiogenic shockCardiac arrestAortic aneurysmCongestive heart failurePeripheral vascular diseaseRhythmAcute myocardial infarctionArterial hypertensionOther diseases of the circulatory system |  1.20 1.241.11 1.30 1.561.33 1.381.311.30  |
| Respiratory pathologyParasitic pneumoniaAspiration pneumoniaTumors of the respiratory tract and lungsStop breathingNekardiogennyj pulmonary edemaBacterial/viral pneumoniaCOPDTALMechanical obstruction of the respiratory systemBronchial asthmaOther respiratory pathology  |  1.10 1.18 1.12 1.17 1.21 1.21 1.28 1.24 1.30 1.40 1.22  |
| Diseases of the digestive tractLiver failure Perf/bowel obstruction Inflammatory diseases (including pancreatitis) Ulcer bleeding Varix bleeding Divertikuleznye bleeding Other diseases of the digestive tract |  1.12 1.34 1.21 1.25 1.28 1.44 1.27  |
| Nerve diseaseIntracranial hemorrhageSubarachnoid hemorrhageStrokeThe central nervous systemTumors of the nervous systemNeuromuscular diseaseCrampsOther neurological diseases  |  1.37 1.39 1.25 1.14 1.30 1.32 1.32 |
| SepsisNemochevoj sepsis Urinary sepsis  |  1.18 1.15 |
| TraumaTrauma to the skull (with or without a clinical examination)Polytrauma (non cranial)  |  1.301.44 |
| Metabolic disease Metabolic coma Diabetic KetoacidosisAn overdose of drugs Other metabolic disorders  |  1.31 1.23 1.42 1.34 |
| Diseases of the bloodCoagulopathy (neutropenia), thrombocytopeniaOther diseases of the blood |  1.371.19 |
| Renal disease | 1.18 |
| Other pathology | 1.46 |
| Patients included |
| Cardiovascular surgeryOperations on the aortaPeripheral vascular surgery without prosthesisOperations on the valves of the heartAbdominal Aneurysm operationVascular prosthesisCarotid endarterectomyOther cardiovascular surgery |  1.281.201.31 1.27 1.51 1.78 1.29 |
| Respiratory pathology Respiratory infection Lung tumorTumors of the mouth, larynx, trachea |Other diseases of respiratory system |  1.64 1.40 1.32 1.47 |
| Diseases of the digestive tractPerf/intestinal ruptureInflammatory diseaseIntestinal obstructionBleedingLiver transplantationTumors of digestive tractHolecist/cholangitisOther diseases of the digestive tract |  1.31 1.28 1.26 1.32 1.321.30 1.231.64  |
| TraumaTrauma to the skull (with or without a clinical examination)Polytrauma (without head injuries) |  1.26 1.39 |
| Neurosurgery Vnutrimozgovaja hematoma Subdural/epidural hematoma Subarachnoid hemorrhageLaminectomy/other spinal surgery Kraniotomija tumors Other neurological pathology |  1.17 1.35 1.34 1.56 1.36 1.52 |
| Renal pathology Kidney tumors Other kidney diseases  |  1.34 1.45 |
| Gynecology Amputation of uterus |  1.28 |
| OrthopedicsFracture of the bones of the hip and limbs |  1.19  |
|  |  |  |

Consistently fold points values for all tables, then the resulting amount must be multiplied by the appropriate factor and get the final result.

*Table No. 10*

Scale SAPS

|  |  |  |  |
| --- | --- | --- | --- |
|   |  Indicator | Points |   |
|   | +4 | +3 | +2 | +1 | 0 | +1 | +2 | +3 | +4 |   |
|   | Age, years | > 75 | 66-75 | 56-65 | 46-55 | < 45 |   |   |   |   |   |
|   | Heart rate, BPM | > 180 | 140-179 | 110-139 |   | 70-109 |   | 55-69 | 40-54 | < 40 |   |
|   | Sistolicescoe ad, mmHg | > 190 |   | 150-18 9 |   | 80-149 |   | 55-79 |   | < 55 |   |
|   | Body temperature,° С | > 41 | 39-41 |   | 38.5 -38.9 | 36-38, 4 | 34-35, 9 | 32-33, 9 | 30-31, 9 | < 30 |   |
|   | The frequency of spontaneous breathing (breaths/min) or ventilation with continuous positive airway pressure | > 50 | 35-49 |   | 25-34 | 12-24 | 10-11 | 6-9 |   | < 6 |   |
|   | Elaboration of urine, l for 24 h |   |   | > 5.0 | 3.5 -4.93 | -3.49 0.7 |   | 0.5-0.69 | 0.2 -0.49 | < 0.2 |   |
|   | Urea in the blood, mmol/l | > 55 | 36-54, 9 | 29-35, 9 | 7.5 -28.9 | 3.5 -7.4 | < 3.5 |   |   |   |   |
|   | Hematocrit,% | > 60 |   | 50-59, 9 | 46-49, 9 | 30-45, 9 |   | 20-29, 9 |   | < 20 |   |
|   | The number of cells, 109/l | > 40 |   | 20-39, 9 | 15-19, 9 | 3-14, 9 |   | 1-2, 9 |   | < 1 |   |
|   | Serum glucose, mmol/l | > 44.5 |   | 20-39, 9 | 15-19, 9 | 3-14, 9 |   | 1-2, 9 |   | < 1 |   |
|   | Potassium, serum mmol/l | > 7 | 6-6, 9 |   | 5.5 -5.9 | 3.5 -5.4 | 3-3, 4 |   | 2.5 -2.9 | < 2.5 |   |
|   | Sodium, serum mmol/l | > 180 | 161-17 9 | 156-16 0 | 151-16 0 | 130-15 0 |   | 120-12 9 | 110-11 9 | < 110 |   |
|   | *Table No. 11*Scale SAPS II   |   |
|  Criterion  | The value of the | Score |
| Age | < 40 | 0 |
| 40-59 | 7 |
| 60-69 | 12 |
| 70-74 | 15 |
| 75-79 | 16 |
| > 80 | 18 |
| HR | < 40 | 11 |
| 40-69 | 2 |
| 70-119 | 0 |
| 120-159 | 4 |
| > 160 | 7 |
| HELL (systolic) | < 70 | 13 |
| 70-99 | 5 |
| 100-199 | 0 |
| > 200 | 2 |
| Body temperature | < 39 | 0 |
| > 39 | 3 |
| If the IVL or CPAPPo 2 / FiO 2  | < 100 | 11 |
| 100-199 | 9 |
| >200 | 6 |
| Diuresis | < 500 | 11 |
| 500-999 | 4 |
| > 1000 | 0 |
| Urea | > 10 | 0 |
| 10-29, 9 | 6 |
| > 30 | 10 |
| Leukocytosis | < 1 | 12 |
| 1-19, 9 | 0 |
| > 20 | 3 |
| Serum potassium | < 3 | 3 |
| 3-4, 9 | 0 |
| > 5 | 3 |
| Sodium | < 125 | 5 |
| 125-144 | 0 |
| > 145 | 1 |
| Bicarbonate | < 15 | 6 |
| 15-19 | 3 |
| > 20 |   |
| Bilirubin | < 68.4 | 0 |
| 68.4 -102.5 | 4 |
| > 102.5 | 9 |
| GLASGOW | < 6 | 26 |
| 6-8 | 13 |
| 9-10 | 7 |
| 11-13 | 5 |
| 14-15 | 0 |
| Chronic diseases | Metastatic cancer | 9 |
| Hematologic tumor | 10 |
| HIV | 17 |
| Type of income | Planned operation | 0 |
| Admission to the PIT | 6 |
| Emergency operation | 8 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

SAPS II = sum of points on all criteria.

The notes.

Data collected during the first 24 h after admission.

Age — patient's age in years.

Heart rate (HR) is the worst figure for 24 h, either low or high.

Body temperature — use the most high.

Po/ratio Fi02 — if the patient was on mechanical ventilation (MV) or NIVL, choose the lowest rate.

Diuresis-if the patient is in intensive care less than 24 h, diuresis count on 24 h at his current pace.

Urea serum or BUN — use the highest values in mmol/l or g/l for serum urea in mg/dl urea nitrogen serum.

Leukocytes, serum sodium, serum bicarbonate-take into account the worst (high or low).

Bilirubin-account for the highest rate in µmol/l or mg/dl.

Glasgow coma scale-take into account the lowest. If the patient is sedatirovan, use the evaluation prior to the sedation.

In 1989, was offered the APACHE II scale (I) that like APACHE-II, in addition to physiological indicators takes into account the patient's age and previous illnesses. APACHE-IIand-III are used extensively in clinical medicine, but these systems have potential restrictions. They do not apply at the pre-hospital stage, assist, as did not take into account the severity of anatomical damage influence on the physiological indexes and not always correlated with them.

Scale SAPS (SimplifiedAcutePhysiologyScore) predlozhenav 1984 g . (J). R . LeGall and represents a simplified version of the shkalyAPACHE. scale of assessment indicators 14 includes SAPS physiological indicators, age of the patient and neurological evaluation on Glasgow coma scale. chronic disease does not precede are taken into account. Existing systems do not replace the classification of disease and complement their objective understanding of the flow of the pathological process, showing its seriousness at the individual patient or group of patients, determine the degree of severity of organ dysfunction.

The main cause of deaths in surgery ulcerative gastroduonenalnyh hemorrhage is a hemorrhage of relapse. Under recurrent ulcer bleeding refers to his resume after spontaneous or endoscopic stop that is judged by a renowned clinical, laboratory and endoscopic data. Operations at an altitude of bleeding are often palliative, leading to a large number of post-operative complications and high mortality indicators. Application of endoscopic treatments helps to achieve high levels of primary hemostasis, however, repeated bleeding occurs in 10-30% of patients. Need a reliable prediction of the recurrence of ulcer bleeding.

The best way of objectification and reliability prediction of recurrence of bleeding is endoscopic ultrasonography. A study performed in the immediate aftermath of the endoscopic hemostasis or within the next hours after him. Determine the exact size of the ulcer, ulcer depth, ulcerogennye changes in the walls of the stomach or duodenal ulcer, ulcer bottom receptacles. Found in the immediate vicinity of the vascular structures in the form of DNA linear arc anjehogennyh formations more mm in diameter indicate a high threat of recurrence of bleeding. Important information can be obtained using live endoscopic ultrasonography (monitoring the effectiveness of endoscopic and drug hemostasis). The disappearance of vascular structures in the bottom of the sores after combined hemostasis testifies to the adequacy of the activities undertaken and testifies to the low likelihood of recurrence of bleeding.

Criteria for highly risk of recurrence of ulcer bleeding is clinical (severe blood loss, collapse in history, age of the patient, severe comorbidity) and laboratory signs (low haemoglobin levels).

Endoscopic signs high risk recurrence of ulcer bleeding is bleeding type FIA - (B) , FI (I) A-B, as well as depth, size and localization of ulcers.

I.i. Zatevahin et al., 1997, 2005. absolute and relative identified signs of threats of repeat bleeding from chronic ulcers of stomach and duodenum. Absolute signs of threats of repeat bleeding are: giant (more than 3 cm) kalleznaja ulcer or hemoglobin level below 50 g/l Relative signs are taken into account in cases where their combination (table 12). Reliability prediction of recurrence of bleeding is 92%.

*Table No. 12*

The relative signs of bleeding threats and their ratings

(Zatevahin I.i. et al., 1997; 2005)

|  |  |  |
| --- | --- | --- |
| **Indicator** | **Criterion** | **Points** |
| Clinical characteristic intensity of bleeding | High intensity of bleeding or collapse in history | 1 |
| Endoscopic characteristics of hemostasis | Any bleeding stopped endoscopically or trombirovannyh vessels in ulcer or ulcer covered sgustkom blood (thrombus) | 1 |
| Endoscopic characteristics of ulcers | Diameter of more than 1.3 cm for gastric ulcers or more than 0.8 cm for duodenal ulcer | 1 |
| 1. Recurrence of bleeding is predicted if there are 2 or 3 points.2. The validity periods of the forecast-the first 10 days from receipt of the patient in the hospital. |

V.k. Gostishhev and M.a. Yevseyev (2005) developed an integrated patogeneticheskiobosnovannuju system based on evaluation of clinical and endoscopic indicators. This system allows you to identify the threat of recurrence of bleeding in 95.7% of the time. Clinical indicators is assessed by the extent of blood loss and largest APACHE III, endoscopic criteria Forrest, nature, size and location of cancer. For prediction of recurrence of ulcer bleeding developed index of recidivism bleeding (CMI), which is obtained by multiplying the magnitude of shock index (SHI) to score on evaluation of endoscopic J. Forrest (F) in point size of ulcers (P):

IRK = Shih (F) x (P)

To determine the amount of blood used table based on indicators of shock index (the ratio of heart rate to sistolicheskomu pressure) proposed in 1976 g. Allgower and (C) . Burri.

Classification by j. Forrestranzhirovana on points as follows:

FIA -5, FIB -4, FIIA -3, FIIB -2, FIIC -1 point sizes got ulcers following assessment in credits: up to 5 mm-1 point, from 5 up to 14 mm-2 points, from 15 to 24 mm-3balla, 25 mm-4. The size of the ulcer is defined using endoscopic rulers during the gastroduodenoskopia-. When performing IRK 2 and less probability of ness of recurrence of bleeding is 5.1%, from 2.1 to IRK 19, 9 points the accuracy ranges from 89 to 92%. With 20 points or more IRK the reliability prediction is 100%. Possible therapeutic interventions when repeat bleeding are: repeated endoscopic hemostasis, chrezkozhnajajembolizacija arteries of stomach and duodenal ulcers, emergency operation.

DIFFERENTIAL DIAGNOSTIKAGASTRODUODENALNYH BLEEDING ULCER ETIOLOGY

The differential diagnosis should be carried out with the syndrome of Mallory-Weiss, bleeding in stomach cancer, portal hypertension syndrome, haemorrhagic gastritis jerozivnym, Verlgofa disease, pulmonary hemorrhage. Bleeding in stomach cancer in the majority of cases observed in the later stages, when the breakup and izjazvlenii tumor. In contrast to ulcers, stomach cancer is more often observed: old age patients, progressive weight loss and cachexia, increasing weakness, belching rotten.

May palpirovatsja Nodular swelling in the stomach, projection determined by metastases in the left supraclavicular region (Virchow), navel (Joseph metastasis), cystic-prjamokishechnoe deepening (Schnitzler), ovary (Krukenberga).

Profuznomu bleeding in stomach cancer is preceded by a period of latent haemorrhage and anaemia patient. When EXAMINATION detected dense bugristoe education, bleeding, fragmentirujushheesja. The final verification of the diagnosis is conducted with biopsy and histological issledovaniibioptata. Mallory Syndrome-Vejsavstrechaetsja of completely healthy people as a result of the sharp increase of intragastric pressure (when strong vomiting associated with surrogate alcohol poisoning, a hypertensive crisis, epilepsy, seasickness). Bleeding occurs when rupture of mucous membranes and other segments of the Cardia of the stomach. Unlike bleeding ulcer bleeding main symptom in this case will be vomiting, first unmodified stomach contents with subsequent appearance in vomit and blood veins "coffee grounds". There is no ulcer history. When EXAMINATION identifies erosion breaks the Cardia of the stomach Mucosa, the absence of ulcers.

(C) indrom the portal hypertension is characterized by splenomegaly, abdominal "dropsy", violation of venous blood outflow, and consequently expansion portokavalnyh anastomoses bleeding occurs when rupture of esophageal varicose veins of the lower part of the esophagus and Cardia of the stomach. There is a massive, boisterous, bleeding mouth full, almost unmodified blood, when bleeding ulcer often "coffee grounds". At a bleeding from varikozno expanded veins oesophagus lacks ulcerative anamnesis. Visually zheltushnye skin, there are "spider veins", "liver Palms", expansion of subcutaneous abdominal veins as "head of Medusa", palpable enlarged liver and spleen, is determined by the free fluid in the abdominal cavity (ascites)-there are no changes in gastroduodenalnom bleeding ulcer Genesis. In jezofagogastroskopii there has been an increase in esophageal and Cardia of the stomach, the absence of ulcers.

Hemorrhagic erosive gastritis develops against the backdrop of chronic gastritis with the formation of the erosion of the stomach lining. In some cases it occurs against the background of the prolonged use of medicines (Steroidal and non-steroidal anti-inflammatory drugs, hormones crust napochechnikov). Differential diagnosis is based on the absence of ulcer history and objective signs of ulcers. Bleeding with hemorrhagic gastritis has the character of a "coffee grounds", noted black Chair. However, unlike ulcerative bleeding weakness does not comes to collapse. Bleeding is usually not profuznogo nature. The most reliable method of research, allowing to differentiate this bleeding is gastroscopy study, which gives the opportunity to discover the erosion of the stomach lining.

Verlgofa Disease is more common in women at a young age. Unlike gastric ulcer and 12 duodenal ulcer detected bleeding in the skin ("spotted" disease), bleeding of mucous membranes (nose, desnevoei etc.) are characterized by changes in the blood: thrombocytopenia, coagulation time and duration of bleeding, blood clot retraction violation. Unlike ulcerative, bleeding disease Verlgofa is not sharp and not accompanied by collapse, exposing the positive symptoms-plucking and tow. When fibrogastroscopy not detected ulcers in the stomach or intestine ulcer 12.

Pulmonary haemorrhage occurs when heart disease with symptoms of stagnation in the small circle of blood circulation, in destructive lung diseases (tuberculosis, abscess, lung cancer, bronchiectasis). Unlike the ulcer, gastrointestinal bleeding, pulmonary cough begins with a first allocation of veins blood in the sputum, and then red blood mixed with air bubbles, accompanied by pronounced shortness of breath, cyanosis, no vomiting and Melena. When radiography of thorax organs detected pockets of destruction of lung tissue, lung cancer with the collapse, increasing heart borders.

LECHENIEGASTRODUODENALNYH BLEEDING OF PEPTIC ULCER

ETIOLOGY

Treatment of patients with gastro-intestinal bleeding involves a three-pronged task: stop the bleeding; treatment effects of acute blood loss; impact on pathogenetic mechanisms of disease, complicated bleeding.

Modern approaches to the treatment of acute ulcerative gastroduodenal hemorrhage combine proactive diagnostic measures with selective definition of indications for emergency operations. The majority of ulcerative gastroduodenal hemorrhage (to 75%) stop comprehensive conservative treatment. Only 25% of patients with peptic ulcer complicated by hemorrhage, gastroduodenalnym must be profuse bleedings urgent surgical intervention. Possible endoscopy combined with modern protivojazvennoj therapy even more strengthened the value of conservative treatment in this group of patients.

*Endoscopic hemostasis*

Therapeutic endoscopy has high efficiency and allows the temporary hemostasis in the overwhelming number of patients and to prepare them for an urgent intervention.

Carrying out endoscopic hemostasis in primary inspection is required when continuing bleeding at the time of endoscopy studies. Stopped at the moment of inspection, bleeding with traces of recently transferred gemorragii also serves as an indication for therapeutic endoscopy.

Indication for carrying out repeated endoscopic hemostasis during dynamic EXAMINATION is negative dynamics from the source of bleeding, where healthy previously "processed" vascular structures, new trombirovanne receptacles or develops a recurrence of bleeding.

Absolute contraindications to the conduct of EXAMINATION;

terminal condition of the patient;

esophageal disease with narrowing his clearance;

categorical refusal of the patient.

Relative contraindications for EXAMINATION:

acute myocardial infarction;

acute brain stroke acute period;

cardio-vascular and respiratory insufficiency III degrees;

mental disorders.

*Application method.* Sighting source irrigation Technique bleeding appeared one of the first irrigation use istochnikakrovotechenija. vasoconstrictor and uterine Haemostatic drugs such as adrenaline, norepinephrine, calcium chloride, ethyl alcohol, Thrombin, e-Aminocaproic acid, kaprofer, ferakril. Method is simple in execution, but nepriemlen at bleedings from kalleznyh ulcers, it is used at low intensity bleedings.

*Injectable method.* Having and infiltrative compression source of bleeding drugs, widely used because of availability, ease of use and low cost are vasoconstrictor and uterine Haemostatic drugs as solutions local anesthetics, saline, adrenaline, noradrenaline, ethanol, dicinon, e-Aminocaproic acid, contrycal, Fibrinogen, trombin, sclerification agent, ascorbic acid. The smallest effect of injection method is marked with a bleeding from ulcers, kalleznyh if the diameter of the receptacle is festering exceeds 1 mm, in case of bleeding from deep ulcers rear wall of the duodenal bulb. The most frequent perforation, necrosis of the mucosa and intramuralnajagematoma, which razvivaetsjapreimushhestvenno in patients with disorders of blood coagulation.

*Laser photocoagulation.* Laser effects of bottom of the ulcer is covered by a film of coagulated blood, zone of coagulation necrosis spreads in the submucosal layer of the stomach wall. muscle and seroznom layers observed inflammatory swelling and minor Staz vessels. Use of the laser to stop bleeding is the most costly method of and this little technique available for broad clinical practice.

*The bleeding source Handling refrigerants.* Vozdejstvienizkimi temperatures (krioaplikacija) did not find wide use in ulcer bleedings. For this method use the chloroethyl, nitrous oxide, freon, stream. The use of these medications cannot be expressed in artistic methods, they effective capillary hemorrhages. The local temperature of the fabric up to 280С, clot formation increases three times and after vazospazma bleeding resumes, so this method is kraktovremennym.

*Diathermocoagulation.* Methods diatermokoagulyatsii (monopolar, bipolar, multipoljarnaja, dry, and using water-gidrojelektrokoaguljacija) have different physical characteristics, technical features, they are distinguished by the availability and ease of execution. There are two main types of Electrosurgical impact on fabric-cutting (dissection) and coagulation. Possible complications-deep hollow organ wall necrosis and perforation as a result.

*Termokauterizacija.* For this type of device is used is HeaterProbe ("glowing probe"), which is an aluminum cylinder with a diameter of 2-3 mm, coated with Teflon-coated face. is connected with the Probe alternator, generating energy 5-30 J and allowing for a few seconds to bring the temperature up to 140-1500c. Thermo-coagulation is widely used in practice foreign endoscopic centres, domestic literature on the application of this method has a single mention.

*Argonoplazmennaja coagulation.* When there is a strong impact of the electric field, the least tightly bound electrons are detached from their atoms, making possible the emergence of the electric current. One important advantage of this method is its contactless- influence of exercise with distances from 2 to 10 mm, so devoid of side effects characteristic of contact methods in the form of recurrence of bleeding as a result of the detachment of thrombus-bunch. Effect of argon plasma easily dosed has no pronounced thermal effect on the deeper layers of the mucosa. This method is characterized by mobility, ease of execution. Contra-indications to administers argonoplazmennoj coagulation. The main reasons for the failures with this method is that you cannot stop the bleeding from a major artery through coagulation and lack of technical ability the exact impact on the vessel.

*Radiowave coagulation.* Radio wave exposure destroys the tissue to a depth of 100-240 microns and sticking the cells forms a compact layer of superficial necrosis. Staying cold, electrode does not cause scalding of the surrounding tissues and promotes good them as healing. advantages of the method is worth noting high security, significantly reduced the risk of organ perforation due to surface effects and lack of deep necrosis. The disadvantage of this method is to avoid interference on the monitor at the time of activating the wave generator.

*Endoscopic clipping.* The method is to fix tantalum clips (clips) on localized bleeding source. Clip placed on the base of the receptacle, or over, if the vessel is seen usually clip rejected via 3-5 days. is highly effective.

*Ligirovaniekrovotochashhej ulcer.* This method consists in imposing master alloys retracted in Cap endoscope plot mucous membrane with ulcer. Way to apply at a bleeding from a resilient sources when no kalleznogo shaft around sores. If the tissue around the ulcer, rigidny You must use other methods of endoscopic hemostasis.

*The method of choice is combined endoscopic hemostasis* : injectable method + diathermocoagulation (either argonoplazmennajakoaguljacija or clipping).

*Alternative methods of stopping ulcerative gastroduodenalnyhkrovotechenij*

Currently, the capacity of local hemostasis expanded significantly through the use of angiography, ultrasound Sonography and Doppler ultrasonography.

With inefficiency or inability to perform endoscopic hemostasis angiography. When stressful erosions and ulcers located in the proximal stomach which departments at 85 per cent receive blood flow from the left gastric artery using selective angiography with the introduction sossoudossoujiwath drugs into the left gastric artery or its jembolizaciju. Introduction to vasopressin leads to stop bleeding from small arteries, arterioles and kapilljarnov. However, infusion of vasopressin can cause myocardial ischemia, hypertension, arrhythmia, intestinal ischemia, oliguria. Due to a significant number of recurrent bleeding, the need for endoscopy in monitoring and transkateternajajembolizacija complications listed above has advantages. Angiographic embolization is an acceptable method of treating patients with a high risk of surgical treatment, but is accompanied by a 50% risk of recurrence of bleeding. In most clinics Europe indication for surgery is only an unsuccessful holding angiographic hemostasis. Now the technique of angiographic embolization, due to its superselektivnosti and the availability of a variety of materials for vascular embolization with minimum diameter has become routine and is intermediate between endoscopic and definitivnym surgical haemostasis. Possible complications angiographic embolization include ischemia duodenal ulcers, heart attacks, liver hematoma formation in the field of femoral artery puncture. Use as a jembola alcohol, fine particulates and gelatin powder may cause occlusion at the level of the capillaries that leads to necrosis of tissues. Endovascular hemostasis is not possible when the localization of ulcers in the stomach and in the Division of the output system right gastric artery and is possible in cases of bleeding ulcers, snabzhajushhihsja from the pool of the left gastric artery. Embolization on the effectiveness of the bleeding has no advantages over endoscopic methods, despite the fact that embolization is not always effective, it can help to temporarily stop the bleeding, winning time to stabilize the patient's condition and perform final endoscopic hemostasis or surgically. Arterial embolization contraindicated in acute bleeding stomach ulcers.

Conservative therapy is a complex of measures aimed at infusion -transfusion correction and prevention of recidivism violations postgemorragicakih bleeding.

For a group of patients with a high threat of recurrence of bleeding after endoscopic hemostasis, but for one reason or another, selected a conservative way of reference to the disappearance of the risk of a return of bleeding should be parenteral nutrition. For patients with a low threat of recurrence of bleeding shows the Mejlengrahta diet (frequent float food gentle mechanically, rich dairy products, and vitamins).

Infusion - transfusion therapy is assigned with a view to restoring the basic parameters of homeostasis, disturbed as a result of acute lung deficit BCC values position transfusion difficult mechanism of impaired homeostasis of blood It should be divided into four main areas: 1) Central hemodynamics; 2) microcirculation; 3) transkapilljarnyj Exchange; 4) respiratory function of blood.

Treatment of blood loss 10 - 15% of Bcc (500 - 700 ml) is only kristalloidnyh infusion solutions in a volume of 200 - 300% of blood loss. 15-30 Blood% Bcc (750 - 1500 ml) offset infuziejkristalloidov and colloids in the ratio of 3:1 with a total of 300% of blood loss. Introduction (kristalloidnyh, disol trisol, acesol, mafusol, 0.9% solution of sodium chloride) and colloidal (based on hydroxyethyl starch: volekam, infukol BSE 6 and 10% solution;: dextran-based poligliukin, reopoligliukin, reogljuman; based on edible gelatin: gelatin) blood products creates in the body the phenomenon of artificial hemodilution, ensures a stable recovery of the macro and microcirculation, immediately improves hemodynamics.

When krovopotere, reaching 30 - 40% of Bcc (1500 - 2000 ml) or more, along with the infusion of blood products transfusion shown Wednesday jeritrocitsoderzhashhih (jeritrocitarnaja mass, jeritrocitarnaja suspension, defrosted and washed red blood cells, red blood cells) and fresh-frozen plasma. Treatment of such blood loss at the first stage of the exercise and kristalloidnyh of colloidal infusion fluids to restore blood circulation due to the effect of hemodilution, then hold razvivshejsjaanemii therapy, started the second phase of treatment. The total amount of perelityh infusion Wednesday must reach not less than 300% of blood loss (jeritrocitsoderzhashhie Wednesday-to 20% of transfusions, FFP-up to 30%). currently, the critical levels of the blood volume blood loss 30 - 40% of BCC: hemoglobin 65-70 g/l, hematocrit 25 - 28%. FFP is the source of the missing clotting factors and platelet deficiency plasma coagulation factors blood can lead to disseminirovannomu vnutrisosudistomu clotting.

Therefore, when blood loss exceeding 40% should be plasma transfusions, BCC, while deep trombozitopenia (less than 100 x 109/l) - a concentrate of platelets.

Postgemorragicheskij and postoperative immune deficiency is pathogenetic factor contributing to the development of infectious complications in the postoperative period. The inclusion of the immunomodulator cytokine several roncoleukin in complex therapy of patients operated on an emergency or deferred order about heavy ulcerative gastroduodenal hemorrhage, allows-neutralize adverse impact of surgical stress on the immune system. Use of the drug also shows the sick group of "risk", with an average degree of blood loss to surgical treatment.

Important indicators of the adequacy of the treatment-hourly diuresis and DVDS. DVDS below 3 - 5 cm water post attests to the need to conduct patient using gipovolemii. infuzionno - transfusion therapy until the DVD reaches 10 - 12 cm water column, and hourly diuresis-30 ml/h (more than 0.5 mL/kg body weight per hour).

For the treatment of acute ulcer bleeding following groups use drugs. the use of antisecretory agents justified the provision on increased secretory activity of the stomach and the leading pathogenetic role of acid - pepticheskogo factors in the progression of fibrinoidnogo necrosis with vascular damage the bottom and walls of the crater, development of ulcer hemorrhage and its recurrence.

Currently accepted is the idea of the possibility of a blood clot in a full, tightly fixed to the wall of the vessel thrombus only when intragastralnom pH not lower than 4. At lower pH values is violated process blood clot retraction and vessel occlusion is unstable. Therefore, it is the antisecretory drugs, creating adequate conditions for trombirovanijaarrozirovannyh vessels ulcerative crater, are essential tools of hemostasis.

In patients with bleeding ulcer, ulcerous application n 2 - blocking is not recommended. Use in treatment "Proton pump blockers." mechanism of action of «Proton pump is connected with blocking the activity of h +, k +-ATP ASE parietal cells. in recent years, posted a large number of works by comparing the effect of blocking n2-receptors and inhibitors Proton pump. "results of clinical studies of the effectiveness of these drugs in the domestic and foreign clinics demonstrated the fundamental superiority of intravenous omeprazole, jezomeprazola how to achieve speed, duration and stability gipoacidnogosostojanija antisekretornogo effect and speed reparations erosivno-yazvennah defeats of gastroduodenal zones and reduce the frequency of relapses gastroduodenal ulcer bleeding.

Almost all generations of "Proton pump" find place in clinical practice: omeproazol (1st generation-losek, losek- ITA, omez, etc.), rabeprazole (pariet-IVpokolenie), esomeprazole (nexium-Vpokolenie).

Immediately after emergency endoscopic hemostasis start treatment omeprazolom (losek) with bolusna (within 20-30 min) intravenous infusion 40 mg in 100 ml izotoniceski solution of sodium chloride using Infusomats. On end of boljusnojinfuzii conduct continuous intravenous drip introduction omeprazole to 160 mg/cut, dissolved in izotonicescom solution of sodium chloride, until the risk of recurrence of bleeding (usually within 3 - 4 d, but not less than 3 days). Later transferred to patients receiving omeprazole inside the dose of 40 mg/cut.

When using neksimuma in a dosage of 40 mg average concentrations of the drug in plasma in 5 times superior to the average concentrations of omeprazole at equivalent doses. For the prevention of recurrence of ulcer bleeding it is expedient to apply daily doses of the drug, 1.5-2 times exceed therapeutic (from 80 mg and above). Most authors consider the optimal introduction 80 mg bolusno followed a constant infusion of 8 mg/h for a period of three days. Then continue therapy oral inhibitors Proton pump "forms".

Antigelikobakternye medication is prescribed concurrently with antisekretornymi means for the speedy healing of ulcer and erosive lesions, which served as the source of the bleeding. For the treatment of patients with peptic ulcer disease associated with Nelicobacterpylori, according to the recommendations of the second part agreement among Maastricht, 2000), adopted in the countries of the European Union suggests the first line, the so-called triple eradication therapy: "Proton inhibitor pump (or ranitidine- bismuth citrate) in a standard dosage of 2 times a day in combination with klaritromitinom on 500 mg 2 times a day and amoksicillinom on 1000 mg 2 times a day or metronidazolom on 500 mg 2 times a day also for at least 7 days. In the absence of jeradikaciiNelicobacterpylorirekomenduetsja conducting eradication therapy the second line, the so-called kvadroterapii: "inhibitor Proton pump" in the standard dosage of 2 times a day in combination with one of the drugs bismuth ( subsalicylate/cubcitrat) to 120 mg 4 times a day on 500 mg metronidazole, 3 times a day and tetracycline on 500 mg 4 times a day for at least 7 days.

Neobhodimakorrekcijakoaguljacionnyh disorders (Hemostatic therapy). Basic desktop gemostatical therapy: etamsylate (dicinon) 12.5%-2 ml (in/in, in/m) 4 times a day, 1% vikasol-1 ml (in/in, in/m) twice a day, calcium chloride 10%-10 ml (/ in) 2 times a day.

All patients with ulcerative gastroduodenalnym hemorrhage increased activated partial thromboplastin time (APTT) more than 40 sec, international normalized ratio (MHO) Bo more 1.3 and reduction in the number of platelets less than 80.000/ml illustrated by the destination and requires 1 k-2 doses of fresh frozen plasma (PTS) per day.

Increase plasma fibrinolytic activity krovivyshe 20% is the indication for the designation of derivative of aprotinin (contrycal-to 50,000 KYA per day or other analogues) and/ilis-aminocapronova acid 5%-100 ml-in/1-2 times a day.

**As a matter of urgency, operate on patients:**

with profuse bleedings continued bleeding and haemorrhagic shock:

with massive bleeding, for which conservative events, including endoscopic techniques are ineffective;

recurrent ulcer bleeding.

**Emergency surgery is indicated:**

patients whose gastrointestinal bleeding stop conservative ways, including endoscopic hemostasis, is not sufficiently reliable and there are indications of a high risk of relapse;

patients for whom an urgent operation of any volume is unacceptable.

Method of surgical intervention with ulcerative gastroduodenal bleedings choose individually depending on the clinical situation, determines the degree of operational risk, intraoperative technical conditions, from the the localization and the nature of the ulcer, as well as from a combination with other complications of bleeding ulcers.

When bleeding duodenal ulcer have organ-preserving operations with vagotomiej (usually stem), different technical simple and low fatality.

Flashing bleeding ulcers (or its excision) with piloroplastikoj and vagotomiej shows the majority of patients, including those with a high degree of operational risk. While stopping bleeding without excision reach the stomach. The operation is piloroduodenotomii, excision or suturing bleeding source individual seams, while penetration-with ulcerative bowel lumen of crater (the patients) and subsequent stem vagotomiej with piloroplastikoj. In recent years, a less invasive version of this operation-laparoscopic truncal vagotomy with piloroplastikoj of mini access.

Antrumjektomija with vagotomiej (or 2/3 resection of the stomach) with the same localization of ulcers shows patients with a relatively low degree of operational risk (young age, small or medium degree of blood loss). the combination of a late stage and stenosis bleeding also serves as an indication to the selection of the operation. The downside of antrumjektomii with vagotomiej-technical complexity, but it provides a more reliable hemostasis and greater radicalism of treatment of peptic ulcer disease. Antrumjektomiju with vagotomiej usually carry out modification Billroth- (II)when the surgeon should be willing to atipichnomu closure "difficult duodenal stump ulcer, penetrating in the pancreas. Antrumjektomija in conjunction with vagotomiej when the ulcer duodenal gradually supplanted the classical 2/3 resection of the stomach.

When a bleeding stomach ulcer and a low degree of operational risk shows a gastrectomy. Excision of ulcer (wedge resection) or topstitching highly positioned bleeding ulcers curvature via gastrotomicheskij access, which are less complex operational interventions, showing patients with a high degree of operational risk.

When combined with gastric ulcer bleeding duodenal ulcer perform stem vagotomiju with antrumjektomiej or 2/3 resection of the stomach.

Gastric resection

The principle of operation (resection) of the stomach is excision of the affected part of the stomach and gastrointestinal vosstanovleniinepreryvnosti traktaputem anastomosis between kultejzheludka and duodenum or scrawny gut. There are two main rezekciizheludka method. The first way (Billroth I) is a circular piloricheskogoi excision of the antrum of the stomach and nalozheniianastomoza divisions between duodenal kishkoji bottom of gastric stump of type konecv end. To eliminate one of the most opasnyhoslozhnenij this operation — bad tightness anastomosis at the junction of three joints — bylopredlozheno many different modifications: Kocher (Kocher), Gaberera (Haberer), Gopelja-Bebkoka (Gopel-Babcock), Finsterera (Finsterer), etc. Apply way Billroth (I) it is not always possible. This is due to the patient's individual characteristics (shape and dimensions of a stomach ulcer, the severity of cicatricial and inflammatory changes, etc.), which in some cases lead to a lack of technical conditions for this operation. In some cases, there are no technical conditions for applying gastroduodenoanastomoza. The second way is to first otlichaetsjaot II — type B that after resection of zheludkakultju it SEW up tightly and vosstanovlenienepreryvnosti gastrointestinal traktaosushhestvljajut by placing the front ilizadnegogastrojenteroanastomoza. Billroth II, as well as sposobBilrot (I) has a lot of modifications. Particularly widespread modification Chamberlain — Finsterera.

Billroth II operation in essence modifikaciiGofmejstera — Finstererazakljuchaetsja 2/3 — 3/4 resection in gastric tissues verhnejtreti stump him and imposing anastomosis mezhdukorotkoj jejunum loop and the remaining

opening of the stomach. Leading knee petlikishki in this way file neskolkimiuzlovymi seams to the cult of stomach anastomosis above. To determine the size of the deleted parts of the stomach are guided by the following guidelines: when you remove 1/2, 2/3.3/ 4 stomach guide on small curvature is the point which corresponds to the border between the upper and middle third of it, i.e. the place of Division a. gastricaesinistrae the anterior and posterior branches (fig. 2). From this point carry out the three lines to large curvature: first-to the border between the left and middle third of gastro-colon, a bundle that corresponds to 1/3 of the stomach, the other to the middle left third of this ligament separates the 2/3 stomach, and third-place jump gastro-splenic ligament in the colon, which corresponds to ¾ of the stomach (fig. 3).

Figure. 2. Gastric resection Billroth by typeII. The dimensions of the part to be removed

stomach: a 1/2 of the stomach; b-2/3 of the stomach; in-3/4 of the stomach; g-4/5 the stomach; d-complete removal of the stomach (Atlas Vojlenko V.n. et al., 1965).

Figure. 3. Gastric resection Billroth by typeII. The line of intersection

stomach (Atlas Vojlenko V.n. et al., 1965).

Abdominal cavity reveal top sredinnymrazrezom. Wound edges are widely razvodjatv hand and start to inspect the stomach first examine antralnyj and piloricheskij departments, as well as the initial part of the duodenum, and then the stomach abdominal izvlekajutiz and inspect his perednjujustenku and small the curvature. For inspection of the rear wall of the stomach must be cut in the bessosudistom place. gastrocolicum lig. After examination of the start mobilizaciizheludka and the initial part of the dvenadcatiperstnojkishki.

Mobilization of stomach ulcers. Clipping lig. gastrocolicum from the zheludkasleduet start with the middle third of the bolshojkrivizny. to this end, stomach and colon poperechnujuobodochnuju display in the wound and rassekajutzheludochno-bessosudistommeste in the bundle into between branches of the digestive gland- gland of the arteries. The intersection of gastro-colon, svjazkiproizvodjat generally lower gastro-gland vetvejjetih gland with ligation arteries arteries (fig. 4). Distal to first-placed second and clip perezhatuju part svjazkirassekajut. So, small plots of vnachalemobilizujut greater curvature to the left and vverhdo the upper third of the stomach, where the peresekajutmezhdu clips a. et v. gastro-epiploicasinistra.

In the same way cross and perevazave right of the gastro-colon, ligaments before switching it on. dvenadcatiperstnujukishku gatekeeper separately perevazave a. et v. gastroepiploicadextra. Then mobilize initial part of duodenum gut. To do this, cut through the front and rear sheets gastro-colon, ligaments and, pulling up the stomach Department piloricheskij reveal branch a. et v. gastroepiploicaedextrae, to the initial part of the duodenum. These branches cross between the clamps and perevazave. Transverse colon along with the great seal are dipped in the abdominal cavity, and pulling the stomach up, perevazave a few small branches from the posterior wall of duodenum from a. et v. (g) astroduodenalis

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|  |
| Figure. 4. Gastric resection Billroth II by type.Mobilisation of the stomach. The starting pointThe mobilization of large curvature of stomach*1* — a. etv. gastro-epiploicasinistra; *2* -lig. gastrocolicum;*3* — a. et v. gastro-epiploicadextra; *4* -ventriculus(Atlas Vojlenko V.n. et al., 1965).  |

After finishing the mobilization of large curvature, start to mobilize. in mobilizing curvature curvature of stomach should beware of damage added pechenochnojarterii, which often depart from a. (g) astricasinistra and sent to the thicker small seal to the left lobe of liver left perevazave then zheludochnujuarteriju together with the homonymous Vienna. Raised thus compress vessels dvumjakrovoostanavlivajushhimi clamps and cross. The Central ends of sosudovperevjazyvajut thick silk. After jetogoprodolzhajut the mobilization of a small kriviznyv area where the gatekeeper perevazave iperesekajut a. et v. gastricadextra (fig. 5).

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| Fig. 5. Gastric resection Billroth by type(I)(I).Mobilisation of the stomach. The intersection of a. et v.gastricadextra. *1* -ventriculus; *2* — a. etv. gastricadextra; *3* -omenturnminus (poatlasuVojlenkoV. N.ssoavt., 1965).  |

Duodenum mobilized during 2-3 cm. If the ulcer raspolozhenav the initial part of the duodenum, the mobilization of produce below the canker. Finishing the mobilization of gastric, jejunal loop vyvodjatnachalnuju in the upper section of the abdominal cavity for anastomosis. At the root, bryzhejki to the left of the spine, the first loop of jejunum, in which plicaduodenojejunalis chetkoopredeljaetsja tightening. Title from 10-15 cm through the initial loop bryzhejku jejunum spend ketgutovuju and silk threads- the tapes. Then bryzhejku transverse colon dissect vertically for 5-6 cm in bessosudistom place to the left of the a. colicamedia. Through the hole formed by conducting an initial loop of jejunum (fig. 6) and the transverse colon is dipped in the abdominal cavity.

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| Figure. 6. Gastric resection Billroth II by type. Holding the loopjejunum through a hole in the mesentery of the transverse colon(Atlas Vojlenko V.n. et al., 1965).  |

The intersection of duodenal ulcers. Stomach relegated up and vlevoi pull the starting part of the duodenum, which veil the face wipes with both sides of The lower rectum. gatekeeper impose clamp or intestinal pulp. Razdavlivajushhij pulp impose higher gatekeeper and scalpel cross the duodenum at the upper edge of the clamp (fig. 7). Stomach giving way to the left, his stump smeared tincture of iodine and wrap the gauze cloth. After that start the processing of the duodenal stump.

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| Fig. 7. Gastric resection Billroth II by type.The intersection of the duodenum (AtlasVojlenko V.n. et al., 1965).  |

Processing of duodenal stump. Distinguish two groups of methods obrabotkikulti duodenum. Sposobypervoj group used in neizmenennojnachalnoj part of the duodenum; these include ways to Mojnigena-Mushkatina, and g. Skvortsova, s. a. Holdina, E.v. Smirnova, Petca etc. How to second gruppyprimenjajut in low-lying and penetrujushhih ulcers duodenal ulcer, inflammatory changes, its walls and drugihpatologicheskih processes. This group otnosjatsjasposoby Niessen, m. Znamensky, k. p. Sapozhkova, s. Yudin, Krivosheevai etc. Closure of the duodenal stump kishkipri unmodified initial part of its method of Mojnigena — Mushkatina. After the removal of the duodenal mucosa of her stump smeared tincture of iodine and use of continuous ketgutovym seam, piercing the wall gut immediately under the clip. The stitches of the seam on the distance of 0.5-0.7 cm from one another so that they spiral freely lying around the clip (fig. 8). Then on a wall of duodenal kishkinakladyvajut kisetnyj silk suture, which dipped duodenal stump. After tying kisetnogo seam menjajutinstrumenty, tissues and wash their hands. Zatemna stump guts impose 5-6 by uzlovyhshelkovyh-muscle joints.

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| Fig. 8. Gastric resection Billroth II by type.Processing of duodenal stump.Way To Mojnigena-Mushkatina. Overlayobvivnogo seam on the stump (AtlasVojlenko V.n. et al., 1965). |

Further improvement of technology operations, leads to the creation of various surgical stapling instruments. Were created practically all suturing device used in modern gastrohirurgii. This 40-UKL, UKL-60, COP, NZhKA, widely accepted not only domestic, but also foreign surgeons.

After mobilizovanzheludok and processed duodenal stump start to amputation of the stomach inalozheniju anastomosis. To do this, first spiloricheskogo Division stomach remove pulp iaspiratorom sucked off his content and zatemna the stomach through the future intersection imposes two direct gastric bagasse. Odinzhom impose on the part of large curvature, and the second by the small kriviznytak to zhomov ends come into contact; near them impose gastric razdavlivajushhij pulp a deleted part of the stomach. Then, stretch the stomach, hirurgotsekaet his scalpel on the edge of the razdavlivajushhego bagasse (fig. 9) and the drug is removed. Then start to stomach tretikulti ushivanijuverhnej. Most surgeons is sutured stump 2-or trehrjadnym. Pervyjshov placed around gastric bagasse as the duodenal stump. Delay and the same seam nitjunakladyvajut continuous seam through all sloikulti the stomach in the opposite direction.

Starting with the deserozirovannogo site, on small curvature impose second row anchor by-muscle joints so that the previous seam fully plunged, especially in the area of the upper-left corner.

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| Figure. 9. Gastric resection Billroth by typeP. Chamberlain Method Is Finsterera.Clipping to remove part of the stomach(Atlas Vojlenko V.n. et al., 1965).  |

Gemostaticheskijketgutovyj seam, you can also apply under the clip. When this stenkizheludka first Pierce from front to back, and then in the opposite direction narasstojanii 1-1, 5 cm. After zatjagivanijajetogo seam and removing a stump remaining zheludkaproshivajut bagasse thread in reverse direction (curvature) obychnymnepreryvnym seam, passing through krajkulti, then impose hub shelkovyjserozno-muscular seam. Except those listed the above techniques, you can repair the gastric stump be dvuhrjadnympogruzhnym seam using the apparatus UKZh-7. As suture material apply u-shaped brackets from tantaloniobievoj wire. After finishing the repair of the upper third of gastric stump, start imposing anastomosis. For this purpose, prepared a short loop of jejunum leads to the cult of the stomach so that leads its Division corresponded to the low, and tailrace-large curvature. The length of the resulting plicaduodenojejunalisdo hinges from the beginning of the anastomosis should not exceed 8-10 cm. Causes bowel loop file to the cult of the stomach multiple anchor silk stitches over 3-4 cm above the seam tapes (fig. 10) and outlet is one suture to a large curvature.

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| Fig. 10. Gastric resection Billroth by typeP. Chamberlain Method Is Finsterera.Podshivanie short loops to jejunumthe cult of the stomach (Atlas Vojlenko V.n. et al., 1965).  |

Between the stomach and gut impose a number of nodal silk by-muscle joints. At each seam at least grab 5-6 mm serous shell and muscle of the gut and stomach. After that, the bowel wall is interspersed with a scalpel to the mucous membrane and separate bleeding vessels ligated. Scissors cut through the mucous membranes of the intestine and trimmed plot stump of stomach under the clip. The contents of the intestine and stomach sucked off aspirator, and rear lip anastomosis impose continuous ketgutovyj stitch through all the layers of the intestine and stomach (fig. 11). When he reached the corner of anastomosis last stitch seam dislocated the same thread sew front lip anastomosis. While increasingly applying seam hats. Starting and ending threads continuous seam svjazyvajuti trimmed. Change tools, wipes, wash their hands and put the second row anchor muscle by seams on the front wall of the anastomosis. Check permeability of anastomosis. The width of the anastomosis must be at least 5-6 cm (s. Yudin). It is now believed that it was preferable to impose gastroenteroanastomosis single muscle by vnutriuzelkovym seam for a good match and tissue regeneration. This allows you to avoid the development of anastomositis. When you have finished blending anastomosis, izvlekajutvse wipes, and carefully inspect the abdominal cavity. After that, file the cut edges to anastomosis bryzhejki transverse colon (fig. 12). Insufficient fixation anastomosis can lead to penetration of loops of small intestine in Windows bryzhejki and their subsequent infringement. After being relegated anastomosis transverse colon dipped in the abdominal cavity and the abdominal wound layers sewn up tightly.

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| Figure. 11. Gastric resection Billroth II by type.The Way Chamberlain — Finsterera. Overlayobvivnogo seam on the rear lips of anastomosis(Atlas Vojlenko V.n. et al., 1965).  |

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| Figure. 12. Gastric resection Billroth II by type. Podshivaniegastroenteroanastomosis to the edges of the bryzhejki transverse incisioncolon (Atlas Vojlenko V.n. et al., 1965).  |

*Vagotomy*

In 1943,. Dregster and Owens (United States) offered transtorakalnajadvustoronjaja truncal vagotomy. This simple little on volume of operation quickly gained a large number of supporters, and in the 50-IES has grown very quickly, surgeons performing this Final intervention. effect of vagotomy depends in large measure on the completeness of the intersection of nerves that can go several trunks. By palpation define esophageal hole that facilitates entered into the esophagus thick stomach probe. Cross-section of a thin sheet of peritoneum covering the diaphragm to hold somewhat higher esophageal holes closer to the diaphragmatic Vienna. Length of cut is about 4 cm. Finger movement distal examined rasslaivajushhim careful 3-5 cm of the esophagus on its entire circumference. The surgeon identifies the location and number of branches of the front (left) and back (right) of the vagus nerves. Sipping for stomach down the esophagus slightly reduces of mediastinum, while cutting the vagus nerve is clearly determined by palpation in the form of stretched strings. It usually goes one trunk, located on the anterior surface of the esophagus or more right. Nerve special clamp, gently separated from a connective tissue sheath. On the highlighted portion at the top and bottom placed clamps. Plot of 2.5-3.5 length nerve see ran out and sent for histological study. Both ends of the vagus nerve perevazave kapron with ligatures. Right or rear nerve easier to detect when pulling the stomach left and down. Rear vagus nerve at this level, moving away from the esophagus in 1 cm or more, situated at the right timing. His take on the clip are also eroding area. After careful hemostasis incision diaphragmatic Peritoneum is sutured in several main seams.

Piloroplastika for Finneju (fig. 13) with festering proshivaniem vessel in ulcer. This type of piloroplastike mobilized downstream Division duodenal ulcers: the bessosudistom cuts the Koheru stretch along the edges of the lateral intestine peritoneum. By-muscle joints connect the greater curvature of the stomach pyloric Department with the inner edge of the duodenum. Top seam is located immediately at the gatekeeper, lower-at a distance of 7-8 cm from it. The front wall of the stomach and duodenum dissect continuous arch cut. Using suction removes the contents of the stomach and duodenum. Then stitch arrozirovannyj vessel at the bottom of the ulcers in 2 places (above and below arrozii) together with fabrics. This kind of piloroplastiki more justified when the associated complications of duodenal ulcer (a combination of stiff-bleeding ulcer stenosis) when piloroplastika on Gejneku-Mikulichu and Jaddoo often do not provide adequate drainage of the stomach. Piloroplastika on Finneju differs from other ways to piloroplastiki so that it formed a broader withdrawal from the stomach.

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| Fig. 13. Piloroplastika on Finneju (scheme):and is stitching in the front wall of the stomach and DUODENUM,ARC incision cherezprivratnik: b-forming soustja  |

Bleeding duodenal ulcer with piloroplastiki on Finneju implementation used for bleeding duodenal ulcer in case of larger sizes with localization in rear wall of the bulbs and, usually, with penetration in the pancreatic head gland and gepatoduodenalnuju bunch. Following the mobilization of duodenal ulcers form the back wall of Koheru piloroplastiki and perform Horseshoe gastroduodenotomiju. Eroding the edges of the ulcer by lateralnujukraju duodenal bulb. The remaining bottom of the sores on the tissues of the gepatoduodenalnoj ligament and the pancreas head display for the lumen of the duodenum, while partial posterior and lateral walls form a separate vvorachivajushhimi seams to ensure Atraumatic needle. Two rows of stitches close the front stenkupiloroplastiki.

Piloroplastika on Gejneku-Mikulichu (fig. 14).-stitched the tapes to the duodenum at the edges of the front of the semicircle gatekeeper. Hold shirokujupiloroduodenotomiju longitudinal incision. After stripping a bleeding ulcer it is treated as described above. Then pull the seams-tapes, downgrade the longitudinal section of the stomach and duodenum to transverse. Impose a continuous obvivnoj seam rassasyvajushhejsja FLOSS, exciting the whole thickness of the mucous membrane. The second row by-muscle joints form without a crude vvorachivanija tissues.

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| Figure. 14. Piloroplastika on Gejneke-Mikulichu: and-dissection of the lining of the stomach and DUODENUM in longitudinal direction; b-stapling the edges of the incision and transversal direction.  |

Piloroplastika on Jaddoo perform when you localize bleeding ulcers on the front wall of the duodenum. After diamond excision of ulcer arisen piloroduodenotomicheskujuranu zakryvajutv transverse direction as in piloroplastike on Gejneku-Mikulichu.

Basic principles of the postoperative period. Liquids in limited quantities (up to 500 ml) permit, already on the first day of the postoperative period (not counting the day of the operation). With 2-3-days do not limit liquid reception. Meals begin with 2-3-day special diet: the early days (frequent meals every 2-3 h limited amounts; allow product set backgrounds diet 0) gradually expand to 6-7-day to 6-meals based on diet # 1a.

Post-operative drainage of the stomach. Twice a day in the first days of the postoperative period spend control sensing of the stomach.

Treatment aftercare period:

infusion therapy;

antiulcer treatment;

Prevention of motor-excretion disorders;

prophylactic antibiotics broad-spectrum;

repeated enemas for colon liberation from a modified streamed blood;

the use of prophylactic anticoagulants in patients with a high risk of postoperative venous thromboembolic complications.

Motor activity. Movement of the lower limbs begin immediately after waking up the patient after anesthesia. Since the first days of the postoperative period shows the breathing exercises, therapeutic physical training. Get out of bed to allow 2-(e)-3-day post-operative period if no contraindications (severity of the general condition of the patient, the drainage of the abdominal cavity, the threat of recurrence of bleeding from ushitoj ulcers).

The stitches will be removed on 8-10-th day.

Complications of early postoperative period. They include: bleeding into the lumen of the gastrointestinal tract from the line of stitches or piloroplastiki area proshitogo vessel in ulcer; peritonitis, which may be due to damage to the esophagus during vagotomy, as well as insolvency seams piloroplastiki; bleeding into the abdominal cavity;

postoperative pancreatitis when sewing a receptacle in bottom of penetrating in the pancreas, ulcers; violation of the evacuation of the stomach associated with functional changes.

Outpatient treatment of patients in the postoperative period is based on the principles of the first 2 examinations months patients should be under the supervision of a surgeon and a gastroenterologist. Important is evaluating the effectiveness of the treatment, with a value in the definition of future therapeutic measures and forecasting results. Important outcomes indicators may be the results of a study of gastric secretion and effectiveness conducted by antigelikobakternogo treatment. Proof of jerradikacii reached will be negative tests Helicobacterpyloriconducted after 4-week treatment antisekretornymipreparatami.

Included patients continue to receive supports modern antisecrethornoe treatment.

PREVENTION

To prevent the development of ulcerative gastroduodenal hemorrhage by persistent ulcer patients relapse and require the use of drug prophylaxis (H2-receptor blockers and inhibitors of h +, k +- ATPase) in patients with high risk of acute ulcers (any kind of extensive burns, shock, sepsis).

QUESTIONS FOR SELF-MONITORING

1. Definition of ulcers stomach and duodenal ulcers.

2. Etiological causes and contemporary insight into the pathogenesis of peptic ulcer disease and ulcerative gastroduodenalnogo bleeding.

3. Classification of gastroduodenal bleedings.

4. The clinical picture of gastroduodenalnogo ulcer bleeding.

5. Methods of laboratory and instrumental Diagnostics of ulcer bleeding gastroduodenalnogo.

6. Differentiate ulcerous hemorrhage from gastroduodenalnyhkrovotechenij different etiology.

7. Tactics of the surgeon with a bleeding ulcer.

8. General principles and methods of treatment for a bleeding ulcer.

9. Types of operations when bleeding ulcer.

TEST TASKS

Select one or more correct answers

1. In the PROVISION of FIRST MEDICAL AID to a PATIENT with suspected BLEEDING MUST BE

1) determine the bleeding

2) report on the affected hospital

3) assess the severity of the condition of the victim

4) monitor AD

5) determine the volume of circulating blood deficiency

2. WHEN PROVIDING FIRST AID TO PATIENTS WITH KROVOTECHENIEMMOZHNO USED TO DETERMINE THE AMOUNT OF BLOOD LOSS METHODS

1) on relative density

2) on gematokritu and hemoglobin

3) largest index of shock

4) on the severity of patient's condition

3. DETERMINE THE SOURCE OF BLEEDING GASTRODUODENALNOGO ALLOWS

1) x-ray study of the stomach

2) laparoscopy

3) nasogastric route because

4) ESOPHAGOGASTRODUODENOSCOPY

5) redefinition of hemoglobin and hematocrit

4. THE EMERGENCE OF BLACK STOOL IS MOST COMMON AMONG

LOCALIZATION OF THE SOURCE OF BLEEDING IN

1) the esophagus

2) antralnomotdele stomach

3) Cardia have the Department of a stomach

4) body of stomach

5) the duodenum

5. THE DISAPPEARANCE OF PAIN AND THE APPEARANCE OF "MELENY" WITH DUODENAL ULCER IS TYPICAL FOR

1) piloroduodenalnogo stenosis

2) ulcer perforation

3) malignization ulcers

4) bleeding

5) penetration in pancreas

6. PATIENTS WITH INTERNAL BLEEDING MUST BE TRANSPORTED

1) urgent associated transport, necessarily accompanied by relatives or medical staff

2) sanitary transport in a horizontal position, accompanied by

3) sanitary transport, accompanied by medical staff and conducting protivosokovh activities

7. CLINICAL SYMPTOMS CHARACTERISTIC FOR INTERNAL BLEEDING

1) pale skin

2) a feeling of pain in epigastria

3) dizziness

4) frequent heartbeat

5) loose stools

8. DRUGS SHOWN TO PATIENTS WITH SIGNS OF K

1) calcium chloride

2) vikasol

3) jepsil-Aminocaproic acid

4) dicinon

5) glutaminova acid

9. INDICATIONS FOR EMERGENCY OPERATION OF PATIENTS WITH ULCER HAEMORRHAGE ARE

1) grave condition

2) condition of hemorrhagic shock

3) recurrence of bleeding in hospital

4) the presence of kalleznoj ulcer

5) persevering request patient

10. At a BLEEDING FROM ULCERS duodenal ulcer and 12 HIGH RISK SURGICAL OPERATION of CHOICE is CONSIDERED

1) gastric resection

2) topstitching festering receptacle or wedge-shaped excision of ulcer

3) selective vagotomy

11. BLOOD LOSS IS CHARACTERIZED BY MODERATE REDUCTION IN HEMOGLOBIN TO

1) 100 g/l

2) 80 g/l

3) 70 g/l

4) 50 g/l

12. HOW DOES GEMODINAMIKUKROVOPOTERJa10-15% of BCC

1) causes a drastic violation of Central hemodynamic parameters

2) causes a slight decrease in reducing ad

3) does not cause sharp violations hemodynamics

13. THE BASIC PRINCIPLES OF TREATMENT OF BLOOD LOSS ARE

1) the final stop bleeding

2) filling the Bcc and the Elimination of hypovolemia

3) maintenance of Central hemodynamic parameters at the necessary level

4) warning spontannojgemodiljucii

5) elimination of disturbed microcirculation and restore perfusion of tissues

14. ON ADMISSION, THE PATIENT IS DIAGNOSED WITH "BLEEDING" YOU MUST INSTALL

1) the fact that bleeding

2) the source of bleeding

3) for the complications

4) the severity of bleeding

5) define remote forecast

15. CONSERVATIVE TREATMENT FOR GASTRODUODENAL ULCER BLEEDINGS SHOULD INCLUDE

1) introduction gemostatikov

2) application of inhibitors of fibrinolysis

3) antiulcer therapy

4) prolonged fasting

5) infusion-transfusion therapy

16. AT THE PRE-HOSPITAL STAGE, WITH A VIEW TO STOPPING BLEEDING CAN BE APPLIED

1) chill on the belly, ice cubes inside

2) gemostatic means intravenously or intramuscularly

3) oxygen therapy

4) intravenous infusion of blood products

5) blood transfusion

17. THEORETICAL BASIS FOR THE USE OF DIETYMEJLENGRAHTA

1) mehanicheskoeshhazhenie gastric mucosa

2) neutralization of gastric juice

3) ensuring high-energy nutrition

4) straight hemostatic effect;

5) inhibition of peristalsis of stomach

18. The PATIENT SUFFERS FROM ULCERS duodenal ulcer 12 OVER 10 years. DURING DEFECATION FELT SEVERE weakness, dizziness, TRANSIENT POTNERJaL. PULSE 100 beats per minute, hell 100/60 mmHg RECTALLY-MELENA. COMPLICATION of PEPTIC ULCER DISEASE 12-DUODENUM of patient?

1) bleeding

2) penetration of ulcer

3) perforation

4) piloroduodenalny stenosis

5) malignization ulcers

19. Patient with gastric clinic PA

BLEEDING, JEKSTRENNOMPORJADKEPOKAZANO

THE FOLLOWING ACTIVITIES

1) constant aspiration of gastric contents

2) stomach roentgenoscopy

3) gastroduodenoscopy

4) laparoscopy

5) definition of circulating blood volume and hematocrit

20. For a BLEEDING DUODENAL ULCER

IS CHARACTERIZED BY THE FOLLOWING SYMPTOMS:

1) increased pain in the abdomen

2) vomit "coffee grounds"

3) decrease pain symptom

4) symptom Schetkina-Bljumberga

5) Melena

21. AMONG the FOLLOWING MEDICATIONS used in

GASTRO-KISHECHNOMKROVOTECHENIEM-ANTIFIBRINOLI

DRUGS ACTION HAS

1) vikasol

2) cimetidine

3) Epsilon-Aminocaproic acid

4) fibrinolysin

5) vikalin

22. SIGNS, CHARACTERISTIC only for GASTRIC

BLEEDING

1) pallor, weakness

2) headache, dizziness

3) vomiting "coffee grounds", tarry stools

4) tachycardia, hypotension

23. ALGOVERA INDEX, USED to EVALUATE

TJAZHESTIKROVOPOTERI IS AN ATTITUDE

1) systolic pressure pulse

2) pulse to sistolicheskomu pressure

3) pulse to diastolicheskomu pressure

4) diastolic pressure to pulse.

STANDARDS OF RESPONSES TO THE TEST TASKS

|  |  |
| --- | --- |
| 1-1, 3, 5 | 13-1, 2, 3, 5 |
| 2-3 | 14-1, 2.3, 4 |
| 3-4 | 15-1, 2, 3, 5 |
| 4-5 | 16-1.2, 3.4 |
| 5-4 | 17-1.2 |
| 6-3 | 18-1 |
| 7-1.2, 3.4 | 19-1, 3, 5 |
| 8-1, 2, 3.4 | 20-2, 3, 5 |
| 9-3 | 21-3 |
| 10-2 | 22-3 |
| 11-2 | 23-2 |
| 12-3 |   |

SITUATIONAL TASKS

Task No. 1

Sick 28 years, went through 2 days after illness onset complaining of weakness, vomiting coffee grounds, color black liquid stools. considers the sick themselves within 5 years, when Mark became recurring in spring and autumn "hungry" pain in epigastria. Deterioration in the past two weeks. Objectively, the general condition is satisfactory. Skin and mucous pale pink colour, 96 pulse/minute, rhythmic, hell 120/70 mm Hg. The belly is not swollen by palpation slightly painful epigastric and right. Motility is defined, Chair of a dark color. In the overall analysis of blood: Er 3.5 x 1012/l, HB-100 g/l.

1. The presumable diagnosis?

2. What methods should be assigned to the survey?

Task No. 2

Sick 40 years suffers from ulcers 12-freshwater gut for 8 years. Last week, intense, hungry and night pain. Suddenly developed a sudden weakness, cold sweat, the disappearance of pain. HELL is 90/60 mm Hg. Church. In the overall analysis of blood: erythrocytes 4.0 × 10/12/l, Hb-130 g/l.

1. Diagnosis?

2. That it is necessary to appoint a to confirm the diagnosis?

Task No. 3

The patient was admitted with a diagnosis of 50years: peptic ulcer disease. chronic ulcer 12-freshwater, oslozhnennnaja bleeding. Serious condition. HELL is 90/60 mmHg in the overall analysis of blood: erythrocytes 4.5 × 1012/l Hb -130 g/l.

1. Explain why blood analysis indicators within the rules?

Task No. 4

Sick 38 years, entered the hospital diagnosis: peptic ulcer disease. Chronic jazvadvenadcatiperstnoj, abnormal bleeding. Objectively, the general condition is satisfactory. Skin and mucous pale pink colour, 96 pulse/minute, rhythmic, hell 120/70 mm Hg. By palpation abdomen is slightly painful epigastric and right. Motility is defined, Chair of a dark color. In the overall analysis of blood: ER 3.5 x 1012/l, HB-105 g/l.

1. Your actions?

2. Principles of conservative therapy?

3. Indications for surgical treatment?

Task No. 5

Patient 30 years, went to the hospital with the diagnosis of gastro-intestinal bleeding. 4 days ago, the patient suddenly appeared black Chair and was momentary loss of consciousness. the condition of the patient. Noted weakness, malaise, and dizziness. Skin pale. Pulse 100 beats/min, rhythmic, satisfactory content. HELL 100/50 mm Hg. Church. HB-40 g/l by palpation Abdomen is soft and painless. During urgent esophagogastroduodenoscopy pathological changes in stomach, 12-duodenal intestine. There are signs of continued bleeding, despite conservative therapy.

1. Tactics of treatment?

Task No. 6

The patient, 45 years old, enrolled in the clinic with a diagnosis of gastro-intestinal bleeding. For 2 days before arrivals appeared tarry stool. The patient during 15 years of suffering ulcers 12-duodenum. The general condition of the patient. Skin pale. Pulse 110 beats/min, rhythmic, satisfactory content. HELL 100/60 mm Hg. Church. HB-50 g/l. Hematocrit 30. When digital rectal study found Kal degteobraznogo species.

1. That you want to assign to the diagnosis?

2. Actions of the surgeon when the diagnosis?

Task No. 7

A man 40 years admitted to the emergency room complaining of weakness: a history of night and "hungry" pain for 10 years with seasonal exacerbations. Skin pale, moist, tachycardia, hell 90/70 mm Hg. Church. Hematocrit-20%. During the inspection was vomiting again with clots of blood.

1. Diagnosis?

Task No. 8

The patient, 60 years of age, enrolled in the clinic with a diagnosis of gastrointestinal bleeding. Within 10 years, suffers from gastric ulcer. For 3 days until he got vomit like "coffee grounds", was a momentary loss of consciousness. The condition of the patient. Skin pale. Pulse 100 beats per minute, rhythmic, satisfactory content. HELL 100/50 mm Hg. Church. HB-40 g/l. Prijekstrennom GASTRODUODENOSCOPY ulcer curvature.

1. Surgeon Actions?

Task No. 9

The man 37 years ago 4:00 appeared sudden weakness, dizziness, vomiting bright red blood. The patient's condition is grave. Skin pale, covered with cold sweat, pulse 110 beats per minute the weak content. HELL-90/60 mm Hg. Church. When gastroscopy revealed blood in the lumen of the stomach, the back wall of the duodenum has a large ulcer bleeding vessel Nv-75 g/l.

1. Tactics of the surgeon?

Task No. 10

The patient was admitted to a hospital with the diagnosis: peptic ulcer disease. Dvenadcatipertnoj ulcer syndrome, abnormal bleeding. Moderate blood loss. When jendoskopicheskomissledovanie in the area of the ulcer detected a blood clot loose, dark red color. A few hours after the patient fell study hell, loose stools again.

1. What happened to the patients?

2. Surgeon Actions?

Task No. 11

The patient, 48 years of age underwent ulcerous hemorrhage (or even several), and he kalleznaja defined GASTRODUODENOSCOPY ulcers. Patients with a long history of illness, no effect of conservative therapy.

1. Tactics of the surgeon?

Task No. 12

Patient 42 years, went to the hospital with signs of gastrointestinal bleeding, prijekstrennojgastroduodenoskopii 12 ulcer duodenal ulcer with a diameter of 1.5 cm. In the centre there is a large ulcer thrombosed vessel. Hemoglobin-80 g/l.

1. Tactics of the surgeon?

Task No. 13

A patient 53 years, with a bleeding ulcer the antrum of the stomach Division, is hospitalized.

1. What is the optimal operation shows the patient?

Task No. 14

Sick 56 years admitted to hospital with manifestations of gastroduodenalnogo bleeding. An emergency fibrojezofagogastroduodenoskopicheskom study on small curvature of the stomach detected krateroobraznoe pitting, diameter up to 3 cm, with jagged edges at the bottom of which is fixed red blood clot without seepage of blood from under him. In the lumen of the stomach-changed blood.

1. Put the diagnosis?

2. Tactics of the surgeon?

Task No. 15

Patient 50 years makes complaints about weakness, dizziness, staining of feces black. Believes himself to be sick with 8:00 am on the current day. Of history found that over the 10 years of suffering ulcers with the localization of ulcers in the duodenum. Condition of the patient corresponds to moderately, indicated some paleness. Breath calm. Pulse-98 BPM, rhythmic. HELL-100/70 mm Hg. Tongue wet. The abdomen is soft, by palpation is painless, pathological entities not palpated. Peritoneal symptoms-negative. Intestinal motility should be heard. In the overall analysis of blood: ER. -3.7 x 1012/l; NV-103 g/l; leukocytes-10.6 x 109/l, Hematocrit is 30%.

1. Diagnosis?

2. Determine the severity of gastrointestinal bleeding?

Task No. 16

The patient, 43 years of age, went to the clinic complaining of weakness, dizziness, episodes of unconscious condition, nausea, vomiting, multiple content type "coffee grounds". From history of duodenal ulcer suffers during the past 12 years. Three years ago, was hospitalized at the ulcer bleeding. The present worsening ulcers within 8 days, took antacids, with a temporary positive effect. Admissions: State of heavy adinamichen. Skin pallor, cold to the touch. A HEART RATE of 110 beats per minute, hell 90/60 mm Hg. Church, HB-81 g/l; Ht-29%. APACHEIII -34 points.

1. Preview?

2. Tactics of the surgeon?

Task No. 17

Patient 39 years, delivered to ambulance to the clinic with diagozom: acute gastroduodenal bleeding ulcerous. during 15 years of suffering ulcers duodenal ulcer. 2 years ago-ushivanieperforativnoj ulcer duodenal ulcers. Privypolnenie emergency EXAMINATION revealed: in the stomach and duodenum are traces of the "coffee grounds" and dark blood; subkompensirovannyj ulcerative stenoses pilorobulbarnoj kalleznaja zone posterior wall duodenal ulcer 1.5 cm depth 3 mm continued venous bleeding sores from the province (ForrestIb). Implemented argonoplazmennaja coagulation.

1. tactics surgeon?

Task No. 18

The patient, 68 years of age, delivered ambulance to the clinic complaining of weakness, nausea, dizziness, vomiting, a one-time "coffee grounds". Suffers from a duodenal ulcer in the past 30 years. The current exacerbation within 10 days. Pripostuplenie State of moderate severity. Skin pale. HR 96 beats per minute, hell 130/80 mm Hg. HB-100 g/l; APACHE (III)-34 points.

1. Preliminary diagnosis?

2. Tactics of the surgeon?

STANDARDS TO ANSWER SITUATIONAL TASKS

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| Objective No. 1 | 1. Peptic ulcer disease. Duodenal ulcer complicated with bleeding.2. It is necessary to define blood group and Rh factor, hematocrit (complete blood count); assign biochemical blood analysis (glucose, bilirubin, creatinine, protein, amylase), blood on the RW, determine the duration of bleeding and coagulation, Petit (prothrombin on prothrombin ratio determination, INR), urine analysis. Study of BCC and its components allows you to more accurately determine the amount of blood loss. After gastric lavage shows emergency GASTRODUODENOSCOPY. |
| Task No. 2 | 1. Peptic ulcer disease. Chronic duodenal ulcer complicated with bleeding. 2. An urgent ESOPHAGOGASTRODUODENOSCOPY.  |
| Task No. 3 | 1. Decrease of hemoglobin, reducing the number of erythrocytes, hematocrit reduction, leucocytosis Orient attitude gravity blood loss, but in the early hours from the start of bleeding these figures changed insignificantly. The true severity of anemia becomes clear only poproshestvii days and more on the background of the intravascular volume recovery due to hemodilution at the expense of extravascular fluid.  |
| Task No. 4 | 1. It is necessary to determine the source of bleeding and its localization, evaluate the extent of blood loss, try to stop the bleeding non hemostasis techniques to assess the risk of recurrence of bleeding. 2. When an hemorrhage after endoscopic or stop his conservative treatment is carried out, including infusion and gemostaticheskujuterapiju, antiulcer treatment. 3. Indication for emergency operation is c bleeding gastroduodenal inefficiency or inability to endoscopic hemostasis. Urgent operations are performed when the volatile gemostaze or repeat bleeding after blood loss recovery and stabilization of vital functions. When bleeding duodenal ulcer Genesis perform topstitching a bleeding ulcer with vagotomiej and piloroplastikoj or resection of the stomach.  |
| Task No. 5 | 1. Diagnostic laparotomy |
| Task No. 6 | 1. Fibrogastroscopy.2. Gastric resection. |
| Task No. 7 | 1. Peptic ulcer disease. Duodenal ulcer complicated with bleeding. |
| Task No. 8 | 1. Shows an operation. Resection of the stomach. |
| Task No. 9 | 1. The patient shows emergency surgery-gastric resection in volume 2/3. |
| Task No. 10 | 1. The patient has a relapse emerged bleeding,2. Shows the emergency operation. Volume of operation 2/3 resection of the stomach. If the patient's condition does not allow you to perform this three-dimensional operation, you might want to limit the excision of a bleeding ulcer and 12 duodenal wall. |
| Task No. 11 | 1. Running 2/3 resection of the stomach. |
| Task No. 12 | 1. emergency operation. |
| Task No. 13 | 1. Gastric resection. |
| Task No. 14 | 1. In this case should be differential diagnosis between chronic gastric ulcer and gastric cancer or ulcers with signs of malignancy.2. There is a threat of recurrent bleeding, so the patient should be offered surgery. |
| Task No. 15 | 1. Patient: peptic ulcer disease. Duodenal ulcer complicated with bleeding.2. Moderate severity. |
| Task No. 16 | 1. Patient: peptic ulcer disease. Duodenal ulcer complicated with bleeding. Blood loss (III class). 2. It is necessary to hospitalize a patient in intensive care. Assign infuziu colloidal and kristalloidnyh solutions, gemostaticheskuju, antiulcer therapy. Stomach wash, perform urgent ESOPHAGOGASTRODUODENOSCOPY. |
| Task No. 17 | 1. the patient at high risk of recurrence of bleeding. Need emergency surgery-distal 2/3 resection of the stomach. |
| Task No. 18 | 1. Patient: peptic ulcer disease. Dvenadcatipertnoj ulcer syndrome, abnormal bleeding. Blood II. 2. It is necessary to hospitalize a patient in intensive care. Wash stomach. Perform an emergency EXAMINATION. |

RECOMMENDED LITERATURE

The main

1. Surgical diseases: Tutorial 2-x/. ed. v. s. Savelieva.-m.: GJeOSTAR-Media, 2008.-t. 1-608; t. 2.-400 c.

2. Surgical diseases: textbook/ed. A.f. Chernousova-М.: GEOTAR-Media, 2010.-with 664.

Additional

1. Verbitsky, V.g. gastrointestinal bleeding of peptic ulcer etiology: pathogenesis, diagnosis, treatment: a guide for physicians/V.g. Verbitsky, Bagnenko S.f., a. a. Kurygin-Spb.: Politehnica, 2004.-242 with.

2. Vojlenko, v.n. Atlas operations on abdominal wall and organs of the abdominal cavity/V.n. Vojlenko, a. i. Medeljan, V. M. Omelchenko.-m.: Moscow, 1965-606 with.

3. Gostishhev, v.k. Gastroduodenal bleeding ulcer etiology (pathogenesis, diagnosis, treatment)/V. Gostishhev, M. A. Evseev.-m.: GEOTAR-Media, 2008.-384s.

4. Evseev, m. a. Antisecretory drugs in emergency surgical Gastroenterology/M.a. Yevseyev-m.: Kwan, 2009-173° c.

5. Clinical surgery: national leadership: 3 t./edited by v.s. Savelyeva, A.i. Kiriyenko.-m.: GEOTAR-Media, 2009.-t. (II) - (C) 317-341.

6. Lebedev Ulcerative gastroduodenal hemorrhage, n./N. Lebedev, a.e. Klimov.-m.: Bean, 2010.-176 s.

7. Maistrenko N.a. surgical treatment of duodenal ulcers/N.a. maistrenko, K.n. Movchun-Spb.: Hippocrates, 2000-348 with.

8. Majat, v.s. gastric resection and gastrectomy/V.s. Majat, y.m. Pantsirev, Y.k., a.a. Kvashnin Greenberg and others.-m.: medicine, 1975-with 367.

9. Private Surgery: tutorial for medical schools: h. (I) - (II) ./ed. Y.l. Shevchenko.-1998.-478 p.

10. Yudin, s. Studies of gastric surgery/s. Yudin-m.: Medgiz, 1955-264 p.

The manual used drawings from the Atlas operations on abdominal wall and abdominal organs. -M.: Moscow, 1965-606 s. Vojlenko V. N., Medeljan a., Omelchenko V.m.

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| **Category of Pathology** |   |
| Pathology | Coefficient |
| Neoperirovannye patients |   |
| Cardiovascular pathologyCardiogenic shockCardiac arrestAortic aneurysmCongestive heart failurePeripheral vascular diseaseRhythmAcute myocardial infarctionArterial hypertensionOther diseases of the circulatory system |   1.20 1.241.11 1.30 1.561.33 1.381.311.30  |
| Respiratory pathologyParasitic pneumoniaAspiration pneumoniaTumors of the respiratory tract and lungsStop breathingNekardiogennyj pulmonary edemaBacterial/viral pneumoniaCOPDTALMechanical obstruction of the respiratory systemBronchial asthmaOther respiratory pathology  |  1.10 1.18 1.12 1.17 1.21 1.21 1.28 1.24 1.30 1.40 1.22  |
| Diseases of the digestive tractLiver failure Perf/bowel obstruction Inflammatory diseases (including pancreatitis) Ulcer bleeding Varix bleeding Divertikuleznye bleeding Other diseases of the digestive tract |  1.12 1.34 1.21 1.25 1.28 1.44 1.27    |
|  Nerve diseaseIntracranial hemorrhageSubarachnoid hemorrhageStrokeThe central nervous systemTumors of the nervous systemNeuromuscular diseaseCrampsOther neurological diseases  |    1.37 1.39 1.25 1.14 1.30 1.32 1.32 |
|  SepsisNemochevoj sepsis Urinary sepsis  |   1.18 1.15 |
|  TraumaTrauma to the skull (with or without a clinical examination)Polytrauma (non cranial)  |  1.301.44 |
|  Metabolic disease Metabolic coma Diabetic KetoacidosisAn overdose of drugs Other metabolic disorders  |  1.31 1.23 1.42 1.34 |
|  Diseases of the bloodCoagulopathy (neutropenia), thrombocytopeniaOther diseases of the blood |   1.371.19 |
|  Renal disease |  1.18 |
| Other pathology | 1.46 |
|  Patients included |   |
|  Cardiovascular surgeryOperations on the aortaPeripheral vascular surgery without prosthesisOperations on the valves of the heartAbdominal Aneurysm operationVascular prosthesisCarotid endarterectomyOther cardiovascular surgery |   1.281.201.31 1.27 1.51 1.78 1.29 |
| Respiratory pathology Respiratory infection Lung tumorTumors of the mouth, larynx, trachea |Other diseases of respiratory system |  1.64 1.40 1.32 1.47 |
| Diseases of the digestive tractPerf/intestinal ruptureInflammatory diseaseIntestinal obstructionBleedingLiver transplantationTumors of digestive tractHolecist/cholangitisOther diseases of the digestive tract |  1.31 1.28 1.26 1.32 1.321.30 1.231.64  |
| TraumaTrauma to the skull (with or without a clinical examination)Polytrauma (without head injuries) |  1.26 1.39 |
| Neurosurgery Vnutrimozgovaja hematoma Subdural/epidural hematoma Subarachnoid hemorrhageLaminectomy/other spinal surgery Kraniotomija tumors Other neurological pathology |  1.17 1.35 1.34 1.56 1.36 1.52 |
| Renal pathology Kidney tumors Other kidney diseases  |  1.34 1.45 |
| Gynecology Amputation of uterus |  1.28 |
| OrthopedicsFracture of the bones of the hip and limbs |  1.19  |
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