

GASTROINTESTINAL BLEEDING WITH NEW ORAL ANTICOAGULANTS: EPIDEMIOLOGY, RISK FACTORS, TREATMENT AND PREVENTION

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Conclusion: One of the problems of emergency surgery that has not been sufficiently resolved so far is the issue of timely diagnosis and treatment tactics of bleeding from the gastrointestinal tract. At the same time, bleeding from stomach and duodenal ulcers is increasing day by day and is currently 90-103 people per 100,000 people [Abdullaev A.N., Litvinova D.V., 2018]. Currently, bleeding due to gastric and duodenal ulcers has doubled, especially in the elderly and elderly. Mortality from acute bleeding due to wounds from the gastrointestinal system is 5-20%, after emergency operations it is 4-73%, and in the elderly, this indicator is higher than 80% [Eremeev A.G., 2018].

Key words: Bleeding, nonsteroidal anti-inflammatory drug, ulcer disease.

Relevance: The famous surgeon of his time S.S. In his book "Sounds of Stomach Surgery" (1955), Yudin noted that bleeding from the gastrointestinal system is a test that even an experienced doctor feels responsible for diagnosing a patient and choosing a treatment strategy. Bleeding from the gastrointestinal system remains a dangerous complication of diseases or some pathological process, as it was half a century ago [63; p. 110-111]. It has been found that the syndrome of various amounts of bleeding from the gastrointestinal system is observed as a complication of about 200 diseases [59; pp. 9-15, 47; pp. 128-137]. Therefore, the etiology of bleeding from the gastrointestinal system is multifactorial, according to several authors [39; pp. 88-90, 29; 1457-1462-b] 55-87% of it is bleeding from the wound. Acute bleeding from the gastrointestinal tract is one of the main reasons why patients are urgently admitted to emergency medical centers. The death rate after this disease is increasing year by year and is currently 5-14%, [23; p. 49-70] and among those over 60 years of age, it is 40% [18; pp. 198-204]. Bleeding from the gastrointestinal tract can occur at any age from 18 to 89 years. This complication is observed 2-3 times more often in men than in women [16; pp. 43-44, 12; pp. 6-11]. The cause of bleeding in diseases of the digestive organs, regardless of the source and nature of bleeding, the pattern of pathogenesis is the same.

This general rule is that any bleeding disrupts the stability of the body's internal environment and all semblance of homeostasis. Taking into account that the function

of all systems and organs in the body is disrupted during bleeding, this process can be considered as a short-term exit from the usual living environment [7; pp. 92-95]. As the organism bleeds through its existing self-regulatory system, it responds with its own complex dynamic processes and reactions. In some cases, this reaction compensates for the lost function of the body and ensures the continuation of life, in most cases it is necessary to turn to therapeutic and even surgical support for this process. In the pathogenesis of bleeding from the gastrointestinal system, mainly hemostasis in movement, microcirculation, respiratory system, blood system, and metabolic hemostasis are observed, and the protective function of the body decreases [22; pp. 89-94, 30; pp. 51-60].

Death due to bleeding from the gastrointestinal system of various etiologies takes the first place even before perforation, which is a complication of duodenal ulcers. The problem of bleeding from the upper part of the gastrointestinal system (gastroduodenal) remains one of the urgent problems of world medicine due to the high incidence rate and death rate, as well as its growth. In the United States alone, of the 300,000 hospitalizations for bleeding each year, 150,000 are due to gastroduodenal ulcers. In Great Britain, bleeding from acute wounds requiring hospitalization is 25 per 100,000 [26; pp. 118-122].

Currently, bleeding due to gastric and duodenal ulcers has doubled, especially in the elderly and elderly. Mortality from acute bleeding due to wounds from the gastrointestinal system is 5-20%, after emergency operations it is 4-73%, and this indicator is 80% higher in the elderly [28; pp. 42-49, 37; pp. 165-171, 45; pp. 72-77, 49; p. 24]. According to the data of the latest literature, it is observed that ulcer disease, especially ulcers of the stomach, is significantly reduced, while bleeding from the gastrointestinal system, on the contrary, is observed to increase due to non-steroidal anti-inflammatory drugs [51; pp. 39-44, 57; pp. 279-284, 65; pp. 34- 39].

It is known that under the influence of nonsteroidal anti-inflammatory drugs, erosions and ulcers develop in the mucous membranes of the esophagus and stomach, which can even cause profuse bleeding. under the influence of non-steroidal antiinflammatory drugs, there is a decrease in the release of prostaglandins in the stomach, which causes a decrease in the cytoprotective ability of the gastric mucosa, and this process leads to erosion and ulcers in the upper part of the gastrointestinal tract [72; pp. 179-184, 81; p. 363-7, 89; p. 4597–4603]. - Non-steroidal anti-inflammatory drugs or drugs that block Cyclooxygenase-1 (TsOG-1) and Cyclooxygenase-2 (TsOG-2) all reduce the function of prostaglandins, increase gastric hypersecretion and increase the acidopeptic and aggressive activity of gastric juice, and reduce the protective properties of the mucous membrane which in turn leads to a violation of the integrity of the mucous membranes of the stomach and duodenum and the chronic continuation of this pathological process. It is also worth noting that long-term use of

non-steroidal anti-inflammatory drugs and risk factors that cause erosion or ulceration in the mucosa of the stomach and duodenum [71; pp. 13-17, 74; pp. 583-587].

Risk factors for erosion and ulceration of the gastric duodenal mucosa after the use of nonsteroidal anti-inflammatory drugs include the following conditions or processes:

- age over 65 (the risk of complications is 4 times higher);
- the presence of ulcer disease in the anamnesis (the risk is 14-17 times higher);
- combined use of glucocorticosteroids, anticoagulants, antiaggregants, cyclosporin A and methotrexate with non-steroidal anti-inflammatory drugs (NSAIDs);
- use of large doses of non-steroidal anti-inflammatory drugs (NSAIDs) and several drugs from this group;
- the presence of concomitant diseases (Ischemic Heart Disease, hypertension, liver or kidney failure due to chronic diseases);
- long-term treatment with non-steroidal anti-inflammatory drugs;

Another noteworthy information is that, according to some authors, when using nonsteroidal anti-inflammatory drugs against the background of *Helicobacter pylori* spread in the mucous membrane of the stomach and duodenum, the erosive ulceration process of the mucous membrane in this area increases by 1.5 times. Eradication of these bacteria reduces the probability of *Yaqindv* induced gastritis [37; pp. 165-171, 46; pp. 97-103, 62; pp. 173-176,].

Another cause of bleeding from the upper part of the gastrointestinal tract is chronic diffuse diseases of the liver, portal hypertension as a result of cirrhosis and fibrosis of the liver. In a healthy person, the portal pressure is 7-12 mm H₂O. equal to Due to complex compensatory mechanisms in the human body, which, if necessary, can be combined into a single system, pressure in the portal system is 25-30 mm.wat. when it exceeds, vascular resistance decreases due to additional intensive circulation. An increase in blood pressure in the portal system leads to a change in local hemodynamics, which leads to dampness in the fundus and body of the stomach and damage to the mucous membrane, this process, in turn, leads to the activation of growth factors and cytokines. At the same time, the production of nitric oxide and endothelin 1 is activated. Nitric oxide increases hyperdynamic circulation and production of peroxynitrite. Together with endothelin 1, peroxynitrite increases the sensitivity of the mucosa to damage [97; p. 682-695]. This author also studied the prevalence of different levels of portal gastropathy (PGP) in liver cirrhosis, especially in alcoholic liver damage [35; pp. 46-50, 41; p. 96, 46; pp. 97-103]

Although some authors believe that the cause of pathological changes in the gastric mucosa in PGP is the transition of blood circulation in the gastric mucosa and submucosa to a hyperdynamic type, as a result of doppler flowmetric examinations, damping in this area was not detected. That is why the term "dampened gastropathy"

is not used recently. According to the author, 30.3% of patients with liver cirrhosis have erosion and ulcerative changes in the mucous membrane of the gastroduodenal area. This pathological process was found in patients with portal gastropathy (PGP) (44.1%) compared to patients without PGP (27.3%). In both groups, acute erosion and ulcers were observed in the antral region of the stomach. When studying the gender aspects of the disease in both groups of patients, it was found that in women with cirrhosis of the liver, on the background of PGP, erosive ulcer processes of the mucous membrane of the gastroduodenal area were significantly more than in the group without PGP (39.3% - 21.3%), but this situation was not confirmed in men [55 ; pp. 9-11].

Podymov S.D. , believes that the pathogenesis of PGP is related to the dilatation and ectasia of the vessels in the mucous membrane, microcirculation of the submucous membrane, and the opening of arterial and venous connections. Also, in the mucous membrane of the stomach, the lining of the mucous layer plays an important role. Although the blood circulation in the stomach is well developed in this category of patients, blood supply to the mucous membrane decreases due to the increase in arterial and venous connections in the submucosal layer. This process, in turn, reduces the resistance of the mucous membrane to external factors and creates conditions for changes in its function and structure [45; pp. 72-77]. Several causes of bleeding from the upper part of the gastrointestinal tract, their pathogenesis, and mechanisms of origin were discussed above. Apparently, it is known that the cause of bleeding from the upper part of the gastrointestinal tract is not only pathological changes in the mucous membrane, but also diffuse changes in the liver. Although there is a lot of information about wounds (acute and chronic), erosive gastritis, the mechanism of bleeding from PGP, and the clinical course, there is little information based on scientific research about the joint course of this pathological process. Including in patients with PGP, no information was found on the rate of bleeding, its duration, specificity of diagnosis and outcome when using nonsteroidal anti-ulcer drugs.

From the results of the examination of 1352 patients treated with acute gastrointestinal bleeding in our clinic, it was found that when the patients who came with bleeding from nonsteroidal anti-ulcer drugs were examined, 68.8% of them were diagnosed with chronic diffuse liver diseases, and in this case even Bleeding has also been reported with small doses of nonsteroidal antiulcer drugs. Information about this pathological process, which is one of the urgent problems of medicine, was not found in the literature we searched. Indications for use of nonsteroidal anti-ulcer drugs in patients with PGP, application procedure, contraindications, duration of use, precautions and. etc. development requires considerable scientific research. In the scientific literature, 3-4% of patients with erosive ulceration of the mucous membrane of the stomach and duodenum during diagnostic esophagogastroduodenofibroscopy

(EGDFS) have been noted, but the exact incidence rate of this pathological process has not been determined.

Acute erosive ulcer processes are often detected in patients who complain of clearly developed dyspeptic conditions, and even more so in 60-70% of cases, complications of acute bleeding from the gastrointestinal tract, or perforation in 0.5-3% [31; pp. 39-44, 34; pp. 101-106]. Erosions and ulcers have been observed after even minor surgical approaches performed in patients with a history of gastrointestinal diseases. Also, in rare cases, acute erosive ulcers of the stomach and duodenum and complications of bleeding are observed in burned people, traumas and after surgical procedures [10; p. 185, 13; pp. 45-48, 18; pp. 198-204]. In 24% of patients treated in intensive care units, acute stomach and duodenal ulcers were observed in autopsy data, and in EGDFS, this pathological process was detected in 50-100% [14; pp. 464-468, 16; pp. 43-44, 25; pp. 41-43]. Morphologically, there are factors that distinguish acute ulcers and erosions of the mucous membrane of the stomach and duodenum from one another. Acute ulcers are caused by deep or all layers of the stomach wall. That is why complications of various degrees of bleeding from acute wounds of the stomach and duodenum are observed up to 75%. The clinical course of bleeding from acute wounds is significantly different from bleeding caused by diseases. Uncomplicated acute wounds are asymptomatic in most patients. Nausea, notes, weakness, means that sharp ulcers, erosions have appeared in the stomach or intestines.

Diagnosis of acute wounds is very difficult for the doctor. Among all examination methods, only esophagogastroduodenoscopy (EGDFS) is a definitive diagnostic method. In endoscopic examination, acute erosion is called a superficial defect of the mucous membrane that does not go beyond the epithelial layer. That is, acute erosion is a superficial defect of the mucous membrane, and the submucosal layer does not participate in the inflammatory process. Diagnosis of acute wounds is based on the results of anamnesis, clinical course, as well as morphological examinations, in addition to endoscopy data. Clear information about pathological changes in the gastric mucosa, i.e., acute gastritis, chronic gastritis or gastropathy, is carried out by biopsy. It is through the biopsy data that the initial diagnosis can be confirmed or denied. A difference of up to 57% can be observed between the diagnoses made by the endoscopic, that is, the visual examination method and the biopsy examination methods. This situation once again confirms that the presence of visible hyperemia, swelling, rashes on the mucous membrane does not always indicate an inflammatory process, and on the contrary, several inflammatory diseases can pass without visual changes [78; r. 2811-2817, 90; r.169-75].

Acute ulcers and erosive processes of the gastrointestinal system can be observed at any age, from newborns to the elderly. The incidence rate of acute erosion and ulcerative processes is 74.6% among adults. In general, inflammatory processes of

the gastric mucosa are divided into gastritis and gastropathies. The term "gastritis" refers to pathological changes occurring mainly in the mucous membrane due to the inflammatory process. Gastropathy occurs without an inflammatory process. However, it should also be noted that destructive and regenerative changes in the mucous membrane of the stomach may not always be accompanied by an inflammatory process. In such cases, minimal damage and regeneration of epithelial tissue without inflammatory process is understood as "gastropathy". Clearly distinguishing both pathological processes from one another can be difficult even with the help of EGDFS. Therefore, the final conclusion is shown by histological examination. Biopsy of the mucous membrane makes it possible to distinguish between acute gastritis, chronic gastritis and gastropathy.

Unfortunately, until now, in modern clinical practice, biopsy and histological examination indicators are extremely low [13; pp. 45-48]. Regarding the origin of the mentioned diseases, gastritis can be of autoimmune etiology. Gastritis can also be caused by infections, drugs, strong allergic reaction, or mental depression (trauma). Gastropathy can be caused by endogenous and exogenous triggers, i.e., bile reflux, alcohol, aspirin or NSAIDs, local ischemia, mental trauma, chronic diseases, including portal hypertension. In clinical practice, endoscopists use the term "gastritis" when evaluating the appearance of the gastric mucosa when redness and swelling are detected in the mucosa.

Today, there are several proposed classifications, although there is no comprehensive, general classification of the pathology of the gastric mucosa. These include the Sydney classification and the OLGA classification. These classifications are based on factors such as the histological appearance of the mucous membrane in the disease, the period of development of the process, etiology and pathogenesis [95; p. 77-99, 106; r.118-48]. In most classifications, acute, short-term and long-term chronic processes are distinguished. The difference between acute and chronic types depends on the appearance of the inflammatory process. Acute gastritis is characterized by neutrophilic infiltration, while chronic gastritis is characterized by mixed mononuclear infiltration with a predominance of lymphocytes, plasma cells, and macrophages [98; r. 2347-2353, 119; r. 4959-61]. Conclusion: Thus, the analysis of the literature showed that, despite extensive scientific and practical work on bleeding from the gastrointestinal system and its timely diagnosis and stopping, conservative, mini-invasive treatment methods and postoperative complications, as well as the death rate, remain high. To a large extent, the number of these complications depends on the patient's existing additional diseases, risk factors, the duration of bleeding, and errors in the timely assessment of the patient's condition and the selection of the treatment method.

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