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# BLEEDING FROM THE UPPER GASTROINTESTINAL TRACT, INDUCED BY TAKING NON-STEROIDAL ANTI-INFLAMMATORY DRUGS

Urokov Sh. T., Abdurakhmonov M. M., Khamroev B. S.

Bukhara Medical Institute and the Bukhara branch of the Republican of Medical Sciences

#### ✓ Resume

The problem of bleeding from the upper gastrointestinal tract is currently one of the most urgent in emergency surgery. At the same time, the number of patients with ulcerative bleeding is constantly increasing and amounts to 90-103 per 100,000 adults per year. This report is based on the analysis of the results of treatment of 1155 patients with gastrointestinal bleeding from the upper gastrointestinal tract in the surgical department of the Bukhara branch of the RNCEMP from 2014-2020. The age of patients ranges from 16 to 72 years. Men made up 71%, women-29%, and 26.2% of patients were over the age of 60.

Key words: bleeding,upper gastrointestinal tract, Helicobacter pylori, NSAID, proton pump inhibitor.

# КРОВОТЕЧЕНИЯ ИЗ ВЕРХНИХ ОТДЕЛОВ ЖЕЛУДОЧНО-КИШЕЧНОГО ТРАКТА, ИНДУЦИРОВАННОЕ ПРИЕМОМ НЕСТЕРОИДНЫХ ПРОТИВОВОСПАЛИТЕЛЬНЫХ ПРЕПАРАТОВ

Уроков Ш.Т., Абдурахмонов М.М., Хамроев Б.С.

Бухарский медицинский институт и Бухарский филиал РНЦЭМП

#### √ Резюме

Проблема кровотечений из верхних отделов желудочно-кишечного тракта в настоящее время является одной из наиболее актуальных в хирургии неотложных состояний. При этом число больных с язвенным кровотечением постоянно увеличивается и составляет 90-103 на 100000 взрослого населения в год. Настоящее сообщение основано на анализе результатов лечения 1155 больных с желудочно-кишечными кровотечениями из верхнего отдела желудочно-кишечного тракта в хирургическом отделении Бухарского филиала РНЦЭМП с 2014-2020гг. Возраст больных колеблется от 16 до 72 лет. Мужчины составили 71%, женщины — 29%, в возрасте старше 60 лет было 26,2% больных.

Ключевые слова: кровотечения, верхних отделов желудочно-кишечного тракта, Helicobacter pylori, НПВП, ингибитор протон помпа.

## НОСТЕРОИД ЯЛЛИҒЛАНИШГА ҚАРШИ ДОРИ ҚАБУЛ ҚИЛИНГАНДА ОШҚОЗОН-ИЧАК ТРАКТИНИНГ ЮҚОРИГИ ҚИСМИДАН ҚОН КЕТИШИ

Уроков Ш. Т., Абдурахмонов М. М., Хамроев Б. С.

Бухоро тиббиёт институти ва Республика шошилинч тиббий ёрдам илмий марказининг Бухоро филиали

#### √ Резюме

Юқори ошқозон-ичак трактидан қон кетиш муаммоси хозирги вақтда шошилинч жаррохликда энг долзарб хисобланади. Шу билан бирга, ярали қон билан беморларнинг сони доимий ортиб бормоқда ва йилига 100000 катталар бошига 90-103 ни ташкил этади. Ушбу хисобот 2014-2020 йиллар РШТТЕИМ Бухоро филиалининг жаррохлик булимида юқори ошқозон-ичак тракти ошқозон-ичак қон билан огриган 1155 нафар беморни даволаш натижалари тахлилига асосланган. Беморларнинг ёши 16 дан 72 ёшни ташкил қилди.



Эркаклар 71% ни, аёллар 29% ни ташкил этиб, беморларнинг 26,2% и 60 ёшдан ошганлар бўлди.

Калит сўзлар: қон кетиши, юқори ошқозон-ичак тракти, Helicobacter pylori, ностероид яллигланишга қарши воситалар, протон помпа ингиботори.

#### Relevance

he problem of bleeding from the upper I gastrointestinal tract is currently one of the most urgent in emergency surgery. At the same time, the number of patients with bleeding ulcers is constantly increasing and amounts to 90-103 per 100,000 of the adult population per year [2,5]. Against the background of the emerging trend towards a decrease in the incidence of peptic ulcer disease, especially gastric ulcer, paradoxical, at first glance, is the fact that the number of patients with gastrointestinal bleeding is increasing, this trend is largely due to the widespread use of nonsteroidal anti-inflammatory drugs (NSAIDs), leading to the occurrence of erosions and ulcers of the digestive tract. The leading role in the formation of erosive and ulcerative lesions of the upper gastrointestinal tract is played by a decrease in the cytoprotective properties of the gastric mucosa resulting from a decrease in the synthesis of prostaglandins in the stomach under the influence of NSAIDs [1,6,13]. When taking NSAIDs and blockade of COX-1, all these functions of PG are suppressed, which leads to hypersecretion and an increase in acidopeptic activity of gastric juice, an increase in its aggressive properties, weakening of the protective properties and damage to the mucous membrane of the stomach and duodenum. At the same time, all three levels of protection of the gastric mucosa are reduced (pre-epithelial, epithelial postepithelial, represented by regional blood and microcirculatory bloodstream), conditions are created for erosive and ulcerative damage to the mucous membrane of the stomach and duodenum, and prerequisites for the chronicity of the pathological process arise. It is also necessary to note the risk factors for the development of erosive and ulcerative lesions of the mucous membrane of the stomach and duodenum when taking NSAIDs [1,11,15].

• age over 65 years (increased risk of complications by 4 times); наличие в анамнезе язвенной болезни (повышение риска в 14–17 раз!);

combined intake of NSAIDs with glucocorticoids, anticoagulants, antiplatelet agents, cyclosporin A and methotrexate;

- high doses of NSAIDs and a combination of drugs in this group;
- the presence of concomitant diseases (coronary artery disease, essential arterial

hypertension, hepatic or renal failure);

• long course of treatment with NSAIDs;

A specific feature of the current period is also a more than 2-fold increase in the contingent of elderly and senile patients, including those suffering from bleeding ulcers. Mortality in acute gastrointestinal bleeding of ulcerative etiology is 5-20%; mortality after emergency surgery for recurrent ulcer bleeding is 4-73%, and among elderly patients it exceeds 80% [2,8,10].

Special discussion deserves the assertion of some authors that Helicobacter pylori (Hp), colonizing the stomach, 1.5 times increase the risk of erosive and ulcerative damage to the gastric mucosa and duodenum when taking NSAIDs, and the course of eradication of these bacteria can prevent the development of NSAIDs. gastritis [6,8.13]. The authors of the "Maastricht Consensus-1-5" also strongly recommend that all patients who are scheduled for a course of treatment with NSAIDs to carry out preliminary eradication of Hp [2,3,12,15].

The most common today actively differentiated tactics for ulcerative gastroduodenal bleeding, includes primary endoscopic hemostasis, the effectiveness of which with ongoing ulcerative gastroduodenal bleeding is from 97% to 100% [4,14]. In combination with modern antiulcer drugs, the most effective of which are proton pump inhibitors (PPIs), this can significantly reduce the frequency of recurrence of gastroduodenal ulcerative bleeding after primary endoscopic hemostasis from 12-42% to 2.7-8.9% [3,7, sixteen]. All this makes it possible to consider endoscopic hemostasis in combination with modern antiulcer therapy with PPIs, as an alternative to surgical treatment.

The aim of the study was to determine the role of non-steroidal anti-inflammatory drugs in the development of bleeding from the upper gastrointestinal tract.

### Material and methods

This message is based on the analysis of the results of treatment of 1155 patients with gastrointestinal bleeding from the upper gastrointestinal tract in the surgical department of the Bukhara branch of the RSCEMP from 2014-2020. The age of patients ranges from 16 to 72 years. Men accounted for 71%, women - 29%,

over the age of 60 there were 26.2% of patients. According to the etiological sign, the patients were divided into 2 groups: the 1st group, patients with gastrointestinal bleeding of ulcerative etiology amounted to 765 (66.3%) patients. Of these, bleeding in chronic stomach and duodenal ulcers was in 498 (64.8%) patients, acute ulcer of drug origin, as a result of drug exposure to the mucous membrane of the stomach and duodenum - 248 (32.4%) patients. Peptic ulcer of gastroenteroanastomosis complicated by bleeding -

19 (2.48%) patients. In the second group, patients with gastrointestinal bleeding of non-ulcerative genesis amounted to 390 (33.7%) patients. Of these, 259 (66.4%) patients had bleeding from the esophageal and gastric varices due to portal hypertension, Mallory-Weiss syndrome in 33 (8.4%) patients, in 54 (13.8%) patients, the source of bleeding was malignant stomach tumors and intestine 44 (11.2%) - erosive hemorrhagic gastritis, duodenitis (Table 1).

Table 1.

The main causes of bleeding from the upper gastrointestinal tract

The main causes of bleeding from the upper gastrointestinal tract				
The reasons	1 gr (n)	2 gr (n)	Sick	%
Peptic ulcer	498		498	43,1
Erosion of the stomach and duodenum	248	44	292	25.3
Varicose veins of the esophagus and stomach		259	259	22,4
Peptic ulcer of gastroanastomosis	19		19	1,6
Tumors of the esophagus and stomach		54	54	4,7
Mallory-Weiss syndrome		33	33	2,8
Total	765(66,3 %)	390(33,7 %)	1155	100%

It should be noted that in 86 (22%) patients of the 2nd group, the use of NSAIDs contributed to gastrointestinal bleeding. Total bleeding due to NSAIDs is 334 (43.6%) patients from all ulcer bleeding. Assessment of the severity of the patient's condition and the degree of blood loss were classified according to A.I. Gorbashko, highlighting mild, moderate and severe degrees. Mild blood loss in group 1 was in 428 (55.9%), moderate in 220 (28.7%), severe in 117 (15.3%) patients. In group 2, gastrointestinal bleeding of non-ulcerative genesis, mild blood loss was in 259 (66.4%), moderate in 92 (23.5%), severe in 39 (10%) patients.

All patients of group I underwent endoscopic examination to determine the source and assess the degree of bleeding according to the Forrest classification. (1987). FIA was detected in 76 (9.8%), FIA in 152 (19.8%), FIIA in 334 (43.6%), FIIB in 123 (16%), FIIC in 66 (8.6%), FIII in -14 (1.8%) patients. Hemoglobin values ranged from 31 to 98 g / l. All patients with bleeding of ulcerative etiology underwent endoscopic clipping of the bleeding vessel or diathermocoagulation to achieve hemostasis. In case of bleeding from the

esophageal and gastric varices due to portal hypertension, endoscopic hemostasis performed by alloying the bleeding node. After completion of endoscopic hemostasis, all patients received anti-secretory PPI therapy. Losek was administered at a maximum dosage of 160 mg per day as a continuous intravenous infusion until the risk of recurrent bleeding was removed (usually within 3-4 days), then 40 mg per day per os. Patients with a low risk of recurrent UHDV also received antisecretory therapy with proton pump inhibitors. Losek was used at a dosage of 40 mg/ day, per os. All patients received anti-Helicobacter pylori therapy: Amoxicillin 2 g per day, Clarithromycin 1 g per day for 7-10 days, de-nol 240 mg twice a day for 15 days Dynamic EGDS was performed in all patients for 2, 3 (only patients with a high risk of recurrence YAGDK), 4, 7, 14 and 28 days from the initial examination. If necessary (active bleeding, exposed thrombosed vessels, or a fixed thrombus-clot) during dynamic EGDS, the prevention of recurrent bleeding was performed using the previously used method of hemostasis. Complex basic conservative therapy was carried out: infusion therapy, hemostatic

agents, transfusion of fresh frozen plasma, ervthrocvte mass. etc. Early endoscopic examination was the most effective means of identifying the causes of bleeding. The so-called delayed operations were performed in patients with stopped bleeding in case of massive blood loss, as well as in case of recurrent bleeding, regardless of the degree of blood loss, usually within 24 hours. With persistent hemostasis and moderate blood loss, patients were operated on in the "cold" period in the first 2 weeks from the moment of admission. In patients with gastro-duodenal bleeding, recurrence of bleeding from the ulcer was observed on the 3-4th day. In 62 patients, it was possible to stop bleeding by repeated endoscopic clipping or diothermocaogulation. In 55 patients, hemostatic measures and endoscopic hemostasis ineffective, which was an indication for emergency surgery. 16 (29%) patients underwent gastric resection according to Billroth-I, 14 (25.4%) gastric resection according to Billroth-II, 13 (23.6%) patients underwent excision of the ulcer with pyloroplasty according to Judd. In extremely serious conditions, 12 (21.8%) patients underwent gastroduodenotomy with suturing of the vessel at the bottom of the ulcer. Mortality in the group of operated patients with gastroduodenal bleeding was observed in 4 (7.2%) patients. predominant causes were: Pulmonary embolism and acute cardiovascular failure. Of 390 patients with gastrointestinal bleeding of non-ulcer genesis due to ineffective endoscopic hemostasis and hemostatic therapy and the threat of recurrent bleeding, 44 (11.2%) patients with esophageal varices were operated on due to decompensated portal hypertension complicated by bleeding. The patient's operation was performed - gastrotomy, suturing of the vessels of the cardioesophageal zone in 11 (2.8%), and patients with polyposis and stomach tumor complicated by bleeding at the height of bleeding underwent a gastrotomy operation, suturing of the bleeding vessels in 34 (8.7%)) sick. Postoperative mortality in patients of this group was observed in 11 (12.3)%) patients. High numbers of postoperative mortality are largely determined by forced intervention in severely ill patients with advanced tumor processes or profuse bleeding from the veins of the esophagus against the background of decompensated liver cirrhosis.

#### **Conclusions**

1. It has been reliably established that in patients with acute gastrointestinal bleeding of the upper gastrointestinal tract, in 43.6% of cases, a connection with the intake of NSAIDs was found, which should be taken into account when

considering the epidemiology of bleeding from chronic and acute gastric and duodenal ulcers.

- 2. Conducting effective prophylaxis with the use of NSAIDs, taking into account the risk of complications, determine the lower incidence of ulcers in the patients examined by us in comparison with that in clinical studies.
- 3. In this regard, it is necessary to train physicians in methods of risk assessment and control of gastrointestinal complications associated with taking NSAIDs. Patients with risk factors such as a history of ulcers, advanced age and taking low doses of aspirin and NSAIDs should receive prophylactic treatment with proton pump inhibitors.
- 4. In the existing socio-economic conditions and the current system of healthcare organization, it is of paramount importance to regulate the sale of NSAIDs in pharmacies, in accordance with the medical prescription and rational pathogenetic treatment of peptic ulcer disease in outpatient prevention of exacerbations settings, complications of peptic ulcer disease, which without close cooperation surgeons and gastroenterologists are impossible.

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