

ENDOSCOPIC HEMOSTASIS FOR GASTRODUODENAL ULCERATIVE BLEEDING

Abidov Utkir

Bukhara State Medical Institute Bukhara Branch of the
Republican Scientific Center for Emergency Medical Care

Abstract

The article presents the results of fibrogastroduodenoscopy and endoscopic hemostasis in 296 patients with ulcerative bleeding. In 292 (98.9%) patients, using various methods of hemostasis, it was possible to stop the bleeding, only in 4 (1.1%) patients it was not possible to stop the bleeding, which necessitated the need for emergency surgical intervention. Recurrent bleeding after endoscopic hemostasis developed in 8 (2.1%) patients.

Keywords: Endoscopic hemostasis, gastroduodenal ulcer bleeding, fibrogastroduodenoscopy.

Introduction

For many years, the diagnosis and treatment of peptic ulcer disease has remained a pressing medical problem. The most common complication of peptic ulcer disease is gastrointestinal bleeding. In recent decades, there has been an increase in the frequency of ulcerative gastrointestinal bleeding, reaching 40 - 48% in patients of the older age group, accompanied by high mortality - from 10 to 30% [3,4,7,8,9].

Despite the improvement of means and methods for the treatment of ulcerative gastroduodenal bleeding (UGDH), the use of endoscopic methods to stop bleeding, the mortality rate remains high from 10-14% to 30% [11,13].

In choosing treatment tactics for gastroduodenal bleeding, endoscopy plays a leading role. Currently, various methods of endoscopic hemostasis are used, such as injection methods, electro-, thermo-, laser photo-coagulation, argon plasma coagulation, radio wave coagulation, etc. The most common method used is to inject the source of bleeding with a solution of adrenaline [2,10,14,15]. In recent years, argon plasma coagulation and radio wave coagulation have been widely used with good results of endoscopic hemostasis [2,13,14], however, not all medical institutions can afford the use of these hemostasis techniques due to their high cost. Combined methods of endoscopic hemostasis, such as diathermocoagulation and infiltration methods of hemostasis, give better results [9, 12].

According to some authors, primary hemostasis during endoscopic hemostasis is possible in 82-94% of cases, and in 80% of patients, primary hemostasis was final [2,6,11,13].

Currently, individually differentiated tactics are widely used, which includes determining the severity of bleeding, early performance of fibrogastro - duodenoscopy (FGDS) in order to determine the source of bleeding, its nature, the likelihood of relapse, attempts to stop bleeding, as well as determining the timing and volume operations depending on the results of endoscopic hemostasis, taking into account the general condition of the patient [6,12].

Materials and methods

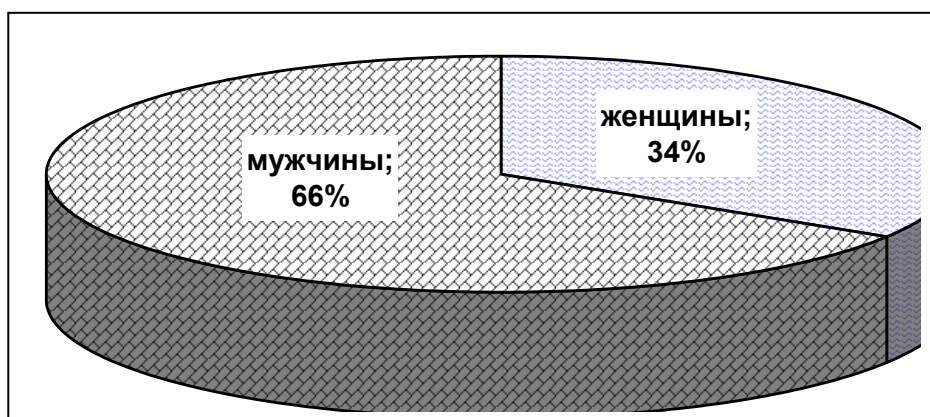
We analyzed the results of emergency endoscopy of 296 patients with gastrointestinal bleeding from ulcers of the gastroduodenal zone. The source of bleeding in 189 (63.8%) was a duodenal ulcer, in 107 (36.2%) - a gastric ulcer.

Table 1. Distribution of patients according to Forrest's classification (1987).

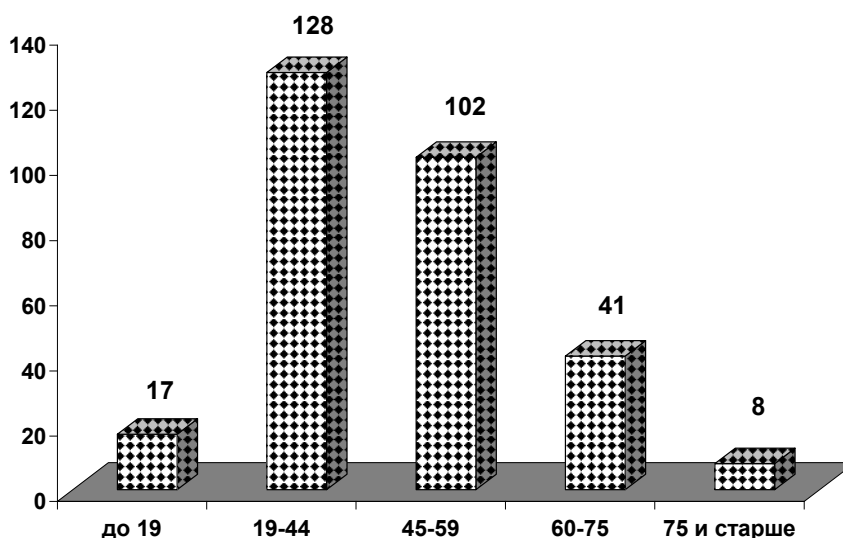
Bleeding activity level	Number of patients, Abs . (%)	Operated urgently
FIA	8(2.7%)	2
FIb	10(3.4%)	2
FIIa	165(55.7)	-
FIIf	113(38.2%)	-

All patients admitted to the hospital underwent diagnostic fibrogastroduodenoscopy (FGDS). Moreover, in 18 cases there was active bleeding (F Ia and Ib), in 278 there was unstable hemostasis (FIIa and FIIf).

Among them, 195 (65.8%) were men. All of them were in hospitals or were admitted to the emergency departments of the Bukhara branch and sub-branches of the Republican Research Center for Medical Empowerment from the period 2009-2011.



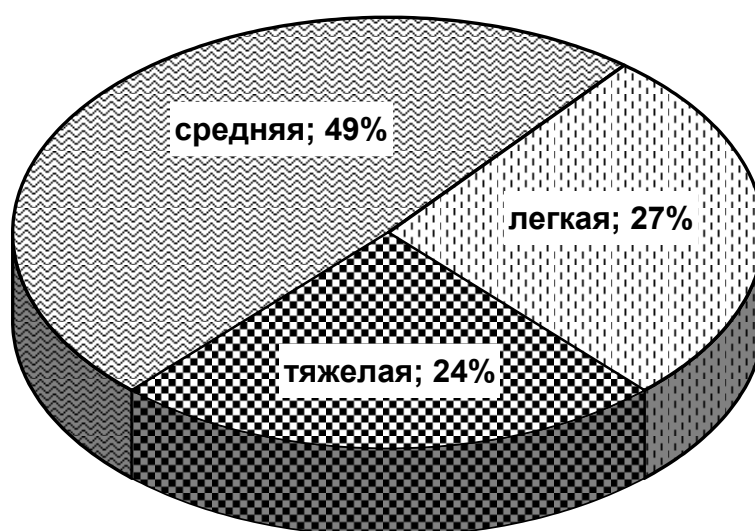
pic. 1. Distribution of patients by age and gender



Results and Discussions

All patients admitted with bleeding from the upper gastrointestinal tract underwent endoscopic examination. In the presence of active bleeding of ulcerative etiology (F1a and F1b) or unstable hemostasis (F1Ia and F1Ib), endoscopic hemostasis was performed.

At the same time, a mild degree of blood loss was diagnosed in 81 (27.4%) patients, a moderate degree - in 144 (48.6%), a severe degree - in 71 (24%), i.e. moderate and severe blood loss amounted to 72.6%.



Pic 2. Distribution of patients depending on the degree of blood loss.

During therapeutic endoscopy, diathermocoagulation was used in 268 (90.5%) patients or diathermocoagulation combined with infiltration hemostasis with a solution of adrenaline or 70% alcohol in 28 (9.5%) patients.

Table 2. Distribution of patients depending on the technique of endoscopic hemostasis.

Endoscopic hemostasis	Number of patients	The nature of hemostasis according to Forrest			
		F1A	F1b	F1Ia	F1Ib
Diathermocoagulation	268	-	-	155	113
Diathermocoagulation and adrenaline injection	28	8	10	10	-
Total, abs .(%)	296	8(2.7%)	10(3.4%)	165(5.7%)	113(38.2%)

Having extensive experience in endoscopic bleeding control, we believe that the main role in success depends on the professional level of the endoscopist.

In all cases of jet bleeding from an arterial vessel (F1a), which was observed in 8 (2.7%) patients, maximum attempts were made to stop the bleeding endoscopically (diathermocoagulation in combination with local injection of adrenaline solution). We believe that this tactic is very effective in critically ill patients, for whom the risk of emergency surgery at the height of bleeding is almost equal to the risk of death from ongoing bleeding. In 5 out of

8 patients, the hemoglobin level was below 40 g/l, in 1 patient it was 10 g/l. In all these patients with increased surgical risk, stable hemostasis was achieved - 6 (75%). Recurrence of bleeding in 1 (12.5%) patient, repeated endoscopic hemostasis and urgent surgery. Two patients underwent emergency surgery, suturing of a bleeding duodenal ulcer and truncal vagotomy , excision of the ulcer or economical gastrectomy for a bleeding gastric ulcer .

In 8 out of 10 patients admitted with active FIB bleeding, reliable hemostasis was achieved. In two patients it was not possible to stop the bleeding; emergency surgery was performed.

In this group of patients, during the first week, after preliminary preparation , 30 (10.1%) patients underwent delayed Billroth surgery - I and II , depending on the indications.

Table 5. Nature of operations performed in patients with bleeding ulcers.

Operations	Emergency		Deferred	Planned	Total
	at the height of bleeding	After recurrent bleeding			
Stitching the ulcer and trunk vagotomy	4	1	-	-	5
Stomach resection - ka according to B I and B II	-	-	25	5	thirty

The use of endoscopic hemostasis in conditions of stopped bleeding (FIIa and FIIb) in 278 (94%) patients is aimed at strengthening the thrombus and preventing recurrent bleeding.

Endoscopic diathermocoagulation was performed in compliance with the following rules:

1. First of all, coagulate the periulcerous zone, while the bleeding stops due to compression of the surrounding tissues; secondly, if necessary, the vessel itself is coagulated.
2. It is incorrect to coagulate the vessel from the very beginning of therapeutic endoscopy, since the thrombus adheres to the instrument and breaks away from the source of bleeding, which causes bleeding.
3. The presence of a blood clot with blood leaking from underneath it is an indication for diathermocoagulation, however, the blood clot should be cauterized from its upper edge, as this will not only stop the bleeding, but also avoid perforation of the stomach or duodenum.

Infiltration hemostasis with a solution of adrenaline or 70% ethyl alcohol was performed for ongoing ulcer bleeding. For this purpose, the indicated solutions were injected periulcerously outside the shaft no closer than 5 - 7 mm from the edge of the ulcer, through an injector with a long (5 mm) needle - 1 ml of adrenaline solution or 70% alcohol and from 10 to 80 ml of isotonic solution of sodium chloride or e-aminocaproic acid.

The tactics of stopping bleeding endoscopically are combined with conservative treatment, using a whole range of drugs aimed at hemostasis and stabilization of the patient's condition.

Modern antisecretory drugs play a major role in the treatment of patients with gastroduodenal bleeding [5,7]. Along with H₂ blockers (famotidine), proton pump blockers are widely used. In critically ill patients who have suffered significant blood loss and are preparing for an upcoming operation, we use famotidine at a dose of 80 mg x 2 times intravenously. If the



patient's condition is stable, we use the drug in the form of capsules (omeprazole, lansoprazole, pantoprazole, pariet, etc.).

Treatment of *Helicobacter pylori* infection was carried out in accordance with the decision of the Maastricht Conference of the European Group for the Study of *H. pylori*. It was started with a first-line regimen: Pariet 20 mg 2 times a day, amoxicillin 1000 mg 2 times a day for 7 days, clarithromycin 500 mg 2 times a day for 7 days [1,5].

To date, no deaths have been observed during operations performed on an emergency or urgent basis, which in general is an indicator of a successfully chosen tactic for ulcerative bleeding.

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