

ASSESSMENT OF THE EFFECTIVENESS OF MINIMALLY INVASIVE INTERVENTION IN PATIENTS WITH LIVER CIRRHOSIS COMPLICATED BY PORTAL HYPERTENSION

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Summary

Data from the examination and treatment of 54 patients with bleeding from varicose veins of the esophagus and stomach against the background of liver cirrhosis, who were treated at the 2nd clinic of the Tashkent Medical Academy for the period 2010-2022, and who underwent endoscopic interventions, were analyzed. The purpose of the study is to study the effectiveness of endoscopic ligation in patients with portal hypertension syndrome complicated by bleeding from varicose veins of the esophagus and stomach. A positive effect was observed in 83.3% of patients. It was also found that endoscopic ligation of varicose veins of the esophagus and stomach reduces the risk of bleeding from varicose veins of the esophagus and stomach to 3.8%. The results obtained indicate the effectiveness of endoscopic ligation in patients with portal hypertension syndrome complicated by bleeding from varicose veins of the esophagus and stomach

Key words

liver cirrhosis, portal hypertension, varicose veins, ligation, phasing.

Relevance

The relevance and social significance of any disease is determined by two main factors - prevalence among the population and the degree of danger of the pathological condition for human life and health. The need for a more in-depth study and discussion of a specific problem depends on the extent to which the modern level of medicine allows protecting the patient from an evolving threat to his health [1,7,12].

Recently, in our country there has been an increase in the incidence of liver cirrhosis (LC), which is the main cause of the development of portal hypertension (PH) [2,8]. It must be considered as an important link in the pathogenesis of hemodynamic disorders, leading to significant changes in blood circulation in the portal vein system and the development of portosystemic anastomoses [3 - 5, 9].

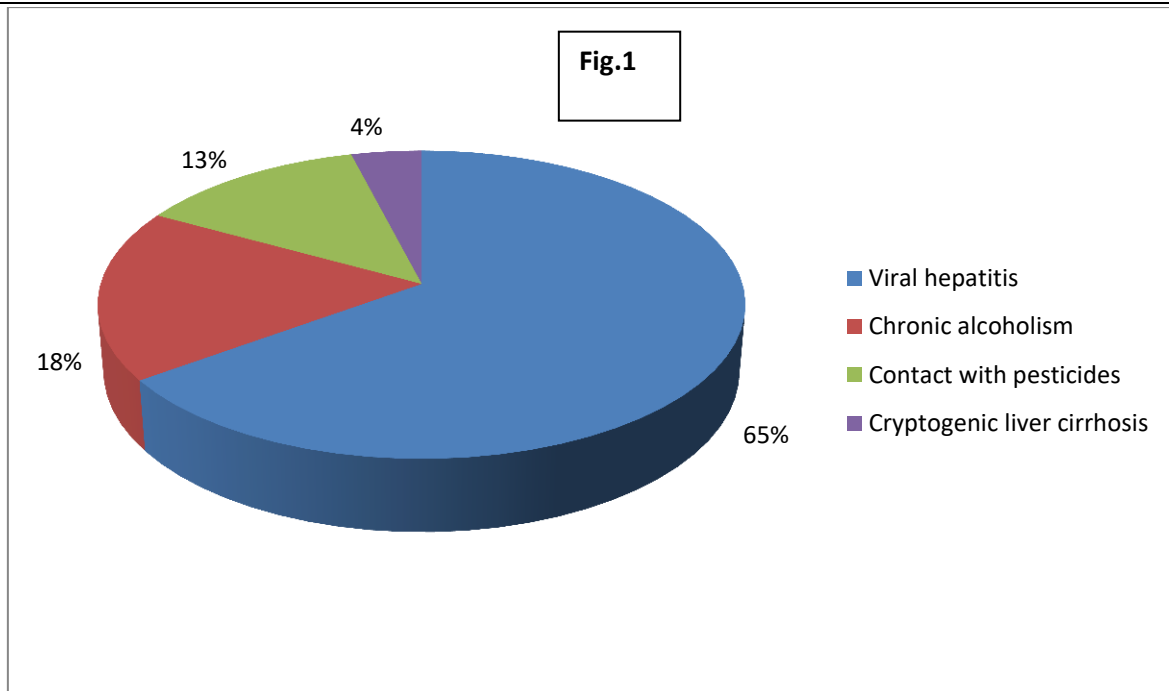
The issues of treatment of PH remain the most complex and controversial for decades due to the complexity of this problem [6, 7, 10, 11], the emergence of new technologies and the unresolved problems currently proposed for researchers.

The purpose of the study is to study the effectiveness of endoscopic ligation in patients with portal hypertension syndrome complicated by bleeding from varicose veins of the esophagus and stomach (VVES).

Materials and methods of research.

Data from the examination and treatment of 54 patients with bleeding from VVES against the background of liver cirrhosis, who were treated at the 2nd clinic of the Tashkent Medical Academy for the period 2010-2022, and who underwent endoscopic interventions, were analyzed.

The most common etiological factor of liver cirrhosis was viral hepatitis (B, C, D), accounting for 65% of the total number of patients, chronic alcoholism - 18% of patients, contact with pesticides in 13% of patients, cryptogenic cirrhosis of the liver in 4% of patients (Fig.1).



The duration of the disease in most patients (71.2%) ranged from 3 to 7 years. Moreover, in 20% of patients, liver cirrhosis was detected less than a year after hepatitis, mainly among those suffering from viral hepatitis.

When assessing the severity of PH and the localization of the portohepatic circulation block, we adhered to the generally accepted classification of Patsiora M.D. [9] (Table 1.). Moreover, the majority (37%) of patients were in the stage of subcompensation of PH.

In both the main and control groups, the main cause of PH was intrahepatic block (liver cirrhosis), mixed (partial portal vein thrombosis and liver cirrhosis) occurred only in the main group in 1.1% of patients.

Table 1

Distribution of patients by stage of portal hypertension syndrome

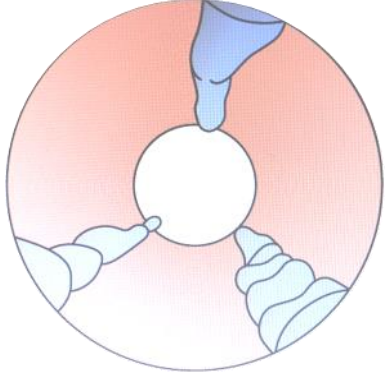

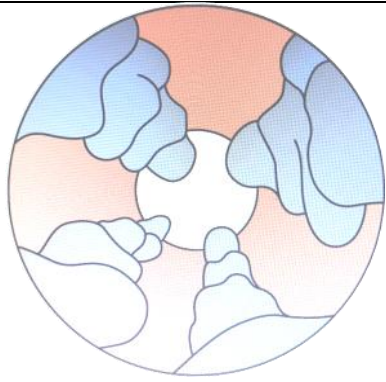

Stage of portal hypertension	Control group	Main group
Compensated stage	3	4
Subcompensated stage	8	11
Decompensated stage	12	16
Total	23	31

It should be noted that all examined patients had previously suffered esophageal and gastric bleeding, and in 18 (14%) it was repeated.

To assess the severity of hepatic cell failure in cirrhosis, the Child-Pugh classification was used.

The complex of examination of patients included clinical, biochemical, instrumental and radiological studies. Based on their data, a diagnosis was made, the course of the disease was monitored, and treatment results were assessed.

Endoscopic examination made it possible to determine the source of bleeding, the presence of varicose veins, their diameter and the extent of submucosal vessels, which made it possible to assess the degree of their expansion according to the classification of **N. Soehendra, K. Binmoeller (Fig. 2)**.

	
<p>1st degree - the diameter of the veins does not exceed 5 mm, they are elongated, located only in the lower third of the esophagus.</p>	
	
<p>Grade 2 - vein diameter 5-10 mm, tortuous, distributed in the middle third of the esophagus.</p>	

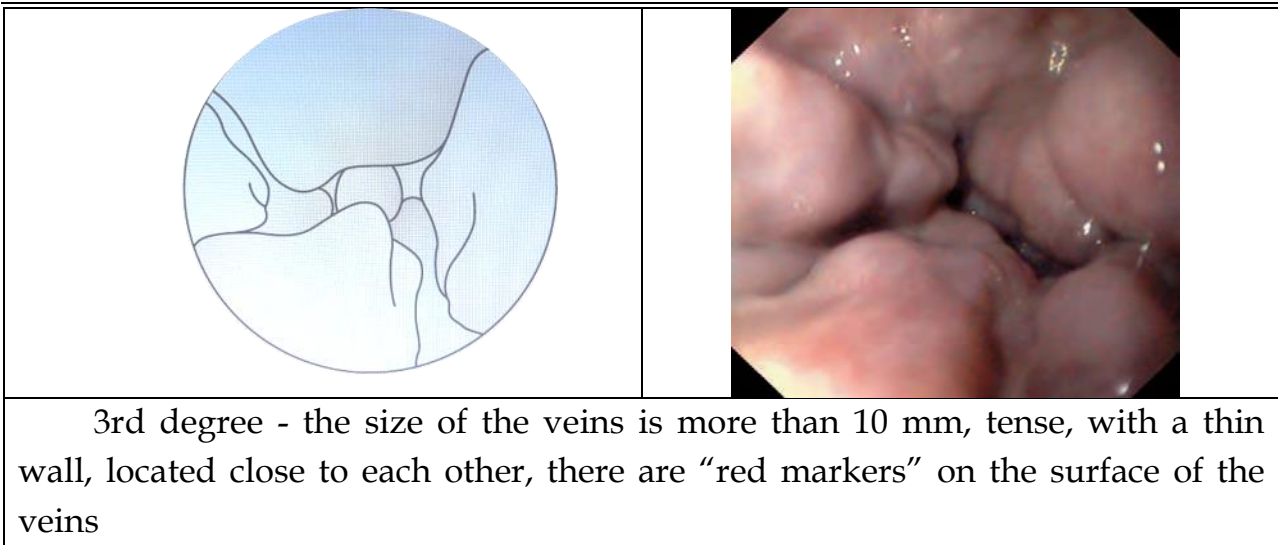


Fig.2. Classification of varicose veins of the esophagus according to N. Soehendra, K. Binmoeller.

Ultrasound examination was carried out not only to confirm the diagnosis, but also to determine the size and position of the liver, the state of the organ parenchyma, the diameter of the intrahepatic vessels of the portal system and their position, the localization of the porta hepatis, the position of the gallbladder and the inferior vena cava. In addition, the presence of space-occupying formations in the right lobe of the liver along the proposed puncture and intestinal interposition was detected, which is a contraindication for performing transhepatic interventions.

Results and discussions

The results of treatment of 54 patients with liver cirrhosis, complicated by portal hypertension and bleeding from the upper abdominal cavity, who were hospitalized in the clinics of the Tashkent Medical Academy in 2010-2022, were analyzed. The average age of the patients was 42.3 ± 1.1 years. Among the patients, male patients predominated - 21. In all cases, PH had the nature of an intrahepatic block, i.e. Cirrhosis of the Liver, the cause of which in 93% of cases was a viral infection and 7% of cases - an association of alcoholic and viral hepatitis.

All patients, depending on the treatment method, were divided into 2 groups: I - control group (n=23) and II - main group (n=31). Unlike the control group, the main group included 31 patients who, along with conservative therapy, underwent endoscopic interventions as planned.

Based on the material of the control group, consisting of 23 patients who received traditional conservative therapy, the course of the disease was analyzed, the frequency and timing of complications was determined, life expectancy and causes of death were identified.

The main group (31 patients) included patients who underwent endoscopic interventions both urgently and for delayed indications based on the developed methods and treatment algorithm.

EL of VVES according to emergency indications was performed in 31 patients: 18 - urgently, 13 - delayed after stopping the bleeding with a Sengsteiken-Blackmore probe. Performing EL in emergency cases with ongoing bleeding without first achieving temporary hemostasis with a Sengstaiken-Blackmore obturator probe in most cases was performed at the height of bleeding.

To carry out EL, we used a Saeed multi-charger from Wilson-Cook (USA) and HMM-7 (Korea). EL courses were carried out at intervals of 1 to 6 months. If, during a visual endoscopic examination after a series of ligation courses, ERVP was not identified or assessed as grade I, then the endoscopic treatment was considered effective and the patient was observed every 3 months. The duration of general treatment lasted from 6 to 12 months, the observation period was 24 months.

EL was performed in the fasted state using a 6- or 10-ring device from Wilson-Cook Medicine. After preliminary endoscopy, the nozzle with ligating latex rings was adjusted to the distal end of the gastroscope. Ligation began after crossing the cardiac ring from the area of the cardioesophageal junction, continuing higher in a checkerboard pattern in a spiral. To capture varicose veins, a vacuum inside the cylinder was created using medical suction. In this case, after tightening the varicose node inside the cylinder, latex rings were lowered from its outer side onto the base of the node. EL during active bleeding was performed with capture of the bleeding vessel or below the bleeding site.

Considering that EL was carried out using multi-charged ligators, "circular" doping of all varicose veins of the esophagus was performed in one session, starting from the level of the esophagogastric junction. If necessary, re-ligation of varicose veins was carried out after a month.

An important indicator of the safety of endoscopic intervention is the frequency of complications and side effects. We studied the incidence of side effects in EL. The most common side effects were chest pain, transient dysphagia and transient hyperthermia. Pain and dysphagia gradually decreased on their own 4-5 days after ligation. The appearance of hyperthermia was more associated with prolonged exposure of the obturator probe, which caused bedsores and inflammation of the esophageal mucosa in 3 (8.1%) patients. This circumstance also complicated the implementation of adequate ligation of esophageal and gastric varices. On the other hand, a pronounced inflammatory process around the ligated areas causes systemic hyperthermia. Absorption of blood masses in the intestines

also causes a rise in temperature and progression of liver failure. In these situations, we considered it necessary to prescribe broad-spectrum antibacterial drugs. The average number of EL courses per patient over 2 years was 3.4 ± 0.3 .

Recurrence of bleeding was observed in 2 patients. In all cases, relapse was caused by slippage of the ligatures on days 2 and 3 after their application. In order to stop bleeding in these patients, obturation of the lumen of the esophagus with a Blackmore probe was used, followed by repeated endoscopic ligation in 3 cases.

Thus, in patients with cirrhosis, the isolated use of endovascular techniques (embolization of the left gastric vein, embolization of the splenic artery) is characterized by a low 2-year survival rate - 38.1%, which is due to frequent anatomical and technical difficulties in implementation - up to 54.3%, unstable primary hemostasis - 30.8%, high incidence of recurrent bleeding from VVES - 52.2% with a risk of mortality - 32.6%.

Conclusion:

1. The use of endoscopic ligation for acute esophagogastric bleeding of portal origin allows stopping bleeding in 68.6 - 83.3% of cases, increasing the two-year survival rate of patients to 58.7% compared to patients receiving transhepatic intervention.

2. At the same time, the most important prognostic factors influencing the survival of patients who have suffered portal bleeding are their belonging to the Child-Pugh functional class and the development of recurrent bleeding. The main factor associated with the development of recurrence of variceal bleeding after an endoscopic treatment program is the lack of achievement of endoscopic eradication of varicose veins of the gastric cardia, which in our observations after EL was 20.2%

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