



Research Article

TACTICS AND TREATMENT OF BLEEDING OF ENLARGED VARICOSE VEINS OF THE ESOPHAGUS AND STOMACH IN CHILDREN WITH PORTAL HYPERTENSION

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ABSTRACT

The effectiveness of providing qualified medical care for portal hypertension syndrome and esophageal-gastric bleeding in children depends on timely diagnosis, timely performed, if necessary, stopping bleeding and adequate surgical treatment. However, when hospitalized later than 1-2 days from the beginning of the first signs of bleeding, the outcome is largely determined by the methods used to stop bleeding, their pathogenetic correspondences to the patterns of development of hepatic and multiple organ failure. Abstract. The effectiveness of providing qualified medical care for portal hypertension syndrome and esophageal-gastric bleeding in children depends on timely diagnosis, timely performed, if necessary, stopping bleeding and adequate surgical treatment. However, when hospitalized later than 1-2 days from the beginning of the first signs of bleeding, the outcome is largely determined by the methods used to stop bleeding, their pathogenetic correspondences to the patterns of development of hepatic and multiple organ failure.

KEYWORDS

Childhood, esophagus, stomach, bleeding, portal hypertension.

INTRODUCTION

Currently, the diagnosis and treatment of bleeding from varicose veins of the stomach and esophagus remains one of the pressing problems of pediatric surgery. It shows that methods of treatment of such patients are directed on the account of modern tendencies, namely the venous collaterals of the stomach and esophagus, based on topographic and anatomical peculiarities. According to authors in the literature, bleeding from varices of the stomach and oesophagus in children occurs as a result of portal hypertension syndrome in 95% to 98% of cases.

Today, the efforts of physicians are aimed at preventing the consistent development of portal hypertension in children and at finding therapeutic and surgical methods that radically reduce the pressure in the portal vein system and thereby prevent the risk of bleeding from varices in the oesophagus and esophagus. Another portal approach to prevent gastroesophageal bleeding is the use of local endoscopic therapy to prevent variceal vein rupture. At diagnosis, esophageal

varices are found in 30-40 per cent of compensated children and 60 per cent of decompensated children. The frequency of bleeding from esophageal varices in children averages 4 per cent per year. In patients with medium- and large-vessel disease, the risk increases to 15%.

Guidelines for the diagnosis and treatment of patients with bleeding from varices of the oesophagus and esophagus provide practical guidelines for the treatment and care of such patients in hospitals of varying severity. These guidelines should be regularly reviewed in accordance with new information in this area. The treatment of portal hypertension is inextricably linked to the type of blockage, the stage of the disease and the degree of compensation, the main focus of treatment is to eliminate the causes of the blockage, restore liver function and profile possible complications.

AIM OF THE STUDY

To improve the effectiveness of treatment in children with bleeding from varices of the stomach and oesophagus.

MATERIALS AND METHODS OF RESEARCH

The Andijan regional branch of the Republican Scientific Center for Emergency Medical Care to study the treatment tactics of bleeding from

varicose veins of the stomach and esophagus in children Andijan regional children multidisciplinary medical centre is devoted to the scientific analysis of the results of examination and treatment of 128 children at the age of 1 to 18 years. The sex ratio of male and female patients was approximately 1:1, with 60 (46.9%) males and 68 (53.1%) females. In terms of age composition, more than half of the patients, i.e. 70 (54.7%), were children aged between 3 and 7 years (Table 1).

Table 1
Distribution of sick children by age and sex

Paul	3 years		3-7 years old		7-13 years old		13 years old		general	
	abs.	%	abs..	%	abs.	%	abs..	%	abs..	%
boys	10	7,8	32	25,0	11	8,6	7	5,5	60	46,9
girls	13	10,2	38	29,7	13	10,2	4	3,1	68	53,1
general	23	18,0	70	54,7	24	18,8	11	8,6	128	100

RESULTS

EFGDS was performed in patients admitted with acute esophageal-gastric bleeding on an emergency basis. Endoscopic examination of the esophagus and stomach revealed grade I GI in 12

children, grade II in 26 patients, grade III in 50 and grade IV in 40 patients. The source of bleeding in 69 children was detected in the esophagus (in c/3 and n/3) in 9 patients in the cardiac region of the stomach. All patients with bleeding of grade 1 or 2 had bleeding after

increasing body temperature and taking NSAIDs, and after EFGDS it was found that their GIH was in the stomach. Esophagitis of varying (mild, moderate and severe) degrees was an additional risk factor for the occurrence of VVH bleeding.

At the height of bleeding the Pacior operation was performed in 25 (45,45%) patients, Nazirov operation - 16 (29,09%), Tanner-Bairov operation - 14 (25,46%).

Performing APR operations at the peak of bleeding

Name of Operation	WFPH (n=9)	Extrahepatic PGH (n = 46)	Total
Bairov circular gastric suturing	1	13	14
Gastric ligature transection according to Nazirov	3	16	16
OperationPaciore	5	17	25
Total	9	46	55

To monitor the effectiveness of surgical correction of PH, endoscopic studies were performed 2-3 months after surgery and in the long-term period every 6-12 months. Long-term follow-up focused on the degree of regression of recurrent bleeding and phlebectasia. For this purpose, patients underwent a two-stage examination every 6 months after surgery. At the first stage - objective assessment of well-being, an examination covering recurrent bleeding

episodes was carried out, at the second stage - control of FGDS to control phlebectasia. At the height of bleeding was carried out operation Pacior in 25 (45,45 %) patients, operation Nazirov in 16 (29,09 %), operation Tanner-Bairov in 14 (25,46 %). To monitor the effectiveness of surgical correction of PH, endoscopic studies were performed 2-3 months after surgery and in the long-term period every 6-12 months.

Long-term follow-up focused on the degree of regression of recurrent bleeding and phlebectasia. For this purpose, patients underwent a two-stage examination every 6 months after surgery. The first stage was an objective assessment of well-being and an examination covering recurrent bleeding episodes; the second stage was FGDS control to control phlebectasia.

The post-operative treatment package included:

1. To counteract aggressive action of gastric juice on digestive mucosa antacids, astringents (Almagel in doses of 10-15-15 ml/day in 2-3 intakes and 2,5-5 ml of animal fat through a tube were used. Feeding through the tube was started from the second day.
2. To normalize motor-evacuatory function of the digestive system 10-15 ml of cerucal, dufalac per day, bowel cleansing by repeated siphonic enemas.
3. Antibiotic therapy - broad spectrum antibiotics.
4. B-group vitamins, retail oil were prescribed to stimulate regeneration of gastric and esophageal mucosa.
5. Hepatoprotectors (ursofalk, Essenciale, Karsil, LIV-52, Heptral, Hepamerz) were used

in patients with ET considering possibility of cirrhotic process activation and for prevention of liver failure, of them preference was given to Hepamerz.

Absence of bleeding, subjective improvement in well-being, primary healing of the postoperative wounds, and absence of cirrhotic activity indicate that the postoperative period is proceeding well. If cirrhotic process in the liver is active despite hemostasis, the occurrence of ascites is considered as satisfactory postoperatively.

Surgery was considered unsatisfactory in the presence of postoperative recurrence of COPD, development of symptoms of spleen infarction (pain syndrome manifested by hyperthermia), submucosal abscess and formation of liver failure.

In the postoperative period after Pacior's operation good results were registered in 3 (13,6%) patients, satisfactory - in 9 (40,9%), unsatisfactory - in 10 (45,4%) patients. In 2 patients with suppuration of the postoperative wound, the wound healed secondarily, in 1 patient on the 14th day after the operation ascites appeared, which was eliminated. In the postoperative period, 5 cases (31.25%) had good results after Nazirov surgery, 9 (56.25%) had



satisfactory results, and 2 (12.5%) had unsatisfactory results. In one patient, symptoms of hyperthermia and paresis persisted for 3 days after surgery. The patient's condition improved after 3 days.

After Bairov circular suturing of stomach out of 14 (25,46%) children who underwent circular suturing of stomach postoperatively, 6 (42,86%) had good postoperative period, 6 (42,86%) had satisfactory period and 2 (14,28%) had unsatisfactory period. One patient developed ascites and this condition improved slightly with the addition of diuretics. One patient developed

clinical signs of acute liver failure after surgery and this condition was resolved by day 4 postoperatively. In this group, the patient died in the midst of increasing liver failure.

In the postoperative period after Pacior's operation good results were registered in 3 (13,6%) patients, satisfactory - in 9 (40,9%), unsatisfactory - in 10 (45,4%) patients. In 2 patients with suppuration of the postoperative wound, the wound healed secondarily, in 1 patient ascites appeared on the 14th day after the operation and was eliminated.

Table 6

Short-term complications after APR surgery performed at the peak of emergency bleeding

Complication	Surgery						Total
	operations Paciora		Circumferenti al gastric suturing according to Bairov		Ligature transection according to Nazirov		
	Intrap PG	VNEPP G	VNUT PG	VNEP H	VNU TPG	VNEPH	
Festering of the postoperative wound	1	2		1			4
Subdiaphragmatic abscess		1					1
Spleen infarction	–	–	–	–	–	2	2
Ascites	1	1	1	–	–	–	3
Repeated bleeding	2	4		2	1	2	11
Lethality	2	–	1	–	1	–	4

Thus, in the postoperative period of follow-up of various types of AR in the nearest future from the total number of patients good results were 81,82 % (55 patients), satisfactory - 9,09 % (5 patients), unsatisfactory - 9,09 % (5 patients). Recurrence of bleeding was registered in 1 person (1,8%) (after ligature gastric transection by Nazirov), lethal result - in 1 patient (2,3%) (after circular suturing of stomach by Bairov).

The absence of recurrence of bleeding from the VCV is one of the effective indicators of the APR operation. Bleeding from phlebectases was observed up to 5 years in 70% of patients after surgery. According to Bairov, recurrence of bleeding was observed in 28.2% of patients after circular suturing of the stomach and in 25% of patients after ligature gastric transection according to Nazirov. In the group of patients undergoing abdominal surgery the incidence of bleeding lasting up to 5 years was relatively low at 25%.

Three months after surgery 23 children underwent endoscopic examination, and one year later 18 children underwent endoscopic examination. During the examination, attention

was paid not only to the degree of clarity of the varices, but also to their intensity and to changes in the mucosa of the oesophagus and stomach.

After Bairov surgery, within 6 months of circular suturing of the abdomen, the varices in the upper third of the oesophagus disappeared in 4 (40%) patients, and the varices in the stomach disappeared in 4 (40%) patients. Before 12 months, varices in the middle third of the esophagus disappeared in 5 (50%) patients and gastric varices disappeared in 2 (20%) children. After 12 months, 6 (60%) patients had grade I, 3 (30%) patients had grade II, and 1 (10%) child had grade III VKV.

After Nazirov's surgery, ligature gastric transection at 3 months in 1 (25%) child - in the upper third of the oesophagus, in 1 patient - loss of GI tract in the stomach. On examination after 12 months, 1 (25%) child was found to have mid-esophageal third and 1 (25%) patient had loss of VCV in the stomach. Variceal plexus disappeared within 6 months after surgery. 12 months after surgery, 2 (25%) patients had grade I, 3 (75%) patients had grade II IVC

Efficacy of APR operations performed at the peak of bleeding and in an emergency delayed procedure

Type of operation	Pacior surgery		Recurrence of bleeding						Complete recurrence of bleeding	
	Circumferential stitching of stomach according to Bairov		Up to 12 months		Up to 3 years		Up to 5 years			
	Abs.	%	Abs.	%	Abs.	%	Abs.	%	Abs.	%
Pacior surgery	25	100%	3	12%	3	12%	4	16%	10	40%
Circumferential stitching of stomach according to Bairov	14	100%	2	14,4%	1	7,1 %	1	7,1%	4	28,6%
Ligature gastric transection according to Nazirov	16	100%	1	6,25%	1	6,25%			2	12,5 %
Total	55	100%	6	10,9%	5	9,1%	5	9,1%	16	29,2%

Thus, in addition to confirming bleeding in a patient with a well-known PH syndrome, in our opinion, it is very important to confirm its topographic localization. The use of endoscopic cuffs or a Blackmore probe for tamponade of

varices in the cardia can increase bleeding in the distal areas of exposure if the source is localised.

Prophylactic EL was performed in a group of patients with third- and fourth-degree VVH and

GI (12 patients). The complexity of the radical treatment in the form of portocaval anastomosis due to the young age of the child, contraindications for prolonged anesthesia, because of concomitant pathologies is shown. The risk of postoperative haemorrhage after prophylactic EL in children with grade III and IV bypass surgery and the risk of repeated haemorrhage are indications .

In this group of 17 children with VVH and 1 person with extra-PVH it should be noted that efficacy of endoscopic treatment of VVH and grade IV is low (20%) due to the accumulation of a variety of varices on the anterior and superior walls of the subcardia and stomach bundle, which is difficult to perform. quality endoscopic sclerotherapy. Occasionally, active bleeding occurs during endoscopic sclerotherapy, requiring timely surgical intervention. Prophylactic ES for varicose veins of grade III and IV to grade II was effective in patients with varicose veins of grade III and III-IV (66,7%, 57,1% and 66,7%, 60% respectively).

CONCLUSIONS

Thus, the dynamics of circular gastric suturing according to Bairov, ligature gastric transection

according to Nazirov and, to a lesser extent, Pacior operation were approximately the same during 3-12 months. Although the diameter of the VVH decreased during the first 12 months after Pacior's operation, their tension remained. At this point, circulating gastric sutures according to Bairov and ligature gastric transection according to Nazirov have not been observed in patients with varicose veins. Pacior, circular suture according to Bairov, ligature cut of the stomach according to Nazirov revealed the development of new varicose veins 3-4 years after the operation and by 5 years after the operation they were close to the initial preoperative values. In patients phlebectasia regression stopped after 4 years and by 5 years there was a slight increase with minimal risk of bleeding. In our opinion, gastric ligature crossing operation, circular sutures through all layers of the stomach in Bairov operation allows complete separation of the two systems and reduction of intramural blood flow along the gastric wall. Relatively long-term haemostatic results were achieved after the Bairov gastric bleeding and the Nazirov gastric ligature transection. However, recurrence of bleeding was observed in 31% and 28% of observations, respectively. We believe that this phenomenon is associated with preserved

collaterals in the lower third of the esophagus. Our views are confirmed by the dynamics of VCL regression in the postoperative period. It was found that phlebectasis reversal after Pacior operation stops after 6-12 months and reaches initial level by 3 years. According to Bairov, the gastric circulation reaches baseline after the application of blood circulation and gastric banding according to Nazirov.

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