

Comparative analysis of chronic hemorrhoids surgical treatment

Hemorojinių mazgų chirurginio gydymo rezultatų palyginimas

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Abstract. The problem of hemorrhoids treatment has been important for more than two thousand years. After the standard closed hemorrhoidectomy in the postoperative period pain syndrome long-term rehabilitation of patients, a large number of relapses, can be observed. Implementation method of rubber band ligation, as well as the trans anal doppler-guided hemorrhoidal artery ligation, are an alternative to hemorrhoidectomy in patients with hemorrhoids stage III. The analysis of treatment result was in 75 patients with chronic hemorrhoids treated at proctologic ward in the station Vitebsk (since 2008 II Vitebsk Regional Clinical Hospital) from 2002 to 2009. According to method of treatment for chronic hemorrhoids three groups of patients. Application were distinguished of trans-anal disarterization of internal hemorrhoids under doppler control with mucopexy and lifting and rubber band ligation gives positive results. In reduction of patients disability from $18,4 \pm 0,5$ days to $1,3 \pm 0,3$ days ($p < 0,05$) rehabilitation of the patients on faster than rehabilitation after using traditional techniques.

Key words: hemorrhoids, Doppler, lifting, mucopexy.

Introduction

Hemorrhoids in structure proctologic disease take the leading place. The disease leads to disability and reduces quality of life. Translated from the Greek term “hemorrhoids” means “bleeding”, thus reflecting the most important symptom of the disease [1].

Rumyantsev (2007) notes that the case of hemorrhoids in Russia makes 118–120 per 1000 adult population, and the proportion in the structure of diseases of the colon ranges from 34 to 41 %. The average age of patients ranges from 45 to 65 years [2].

Rivkin, Dultsev [3, 4, 5], Vorobjev, Shelygin [6, 7, 8], Parks [9], Abcarion [10], Hussein [11] identified the causes of hemorrhoids.

Scientists have been working for centuries over the problem of treatment of hemorrhoidal disease. Fedorov described, that for the first time Salmin suggested

(1829) ligation hemorrhoids [1], and in 1927 Milligan and Morgan made an operation when leg hemorrhoids were vascular ligated for 3.7 and 11 hours. Hemorrhoids excised from the outside inwards, pierced. Wound surfaces were left open, and they heal by secondary tension. Rivkin suggested hemorrhoidectomy according to Milligan. Zagryadskiy [12, 13, 14, 15] replace the traditional methods which were popular at the beginning of the XXI century, introduce more high-tech and less traumatic operation to treat chronic hemorrhoids (trans-anal disarterization of internal hemorrhoids under doppler control with mucopexy and lifting). Marshman and collaborators effectively treat chronic hemorrhoids by ligation applied latex rings [11].

New methods reduce the economic costs for the treatment of hemorrhoidal disease and improve quality of life. The purpose of the study. To conduct a comparative

analysis of standard and modern methods of treatment chronic hemorrhoids.

Material and methods

A retrospective analysis of the results was performed in 75 patients with chronic hemorrhoids treated at proctologic ward in the station Vitebsk (since 2008 second Vitebsk Regional Clinical Hospital) from 2002 to 2009. Three groups of patients were distinguished by the method of treatment for chronic hemorrhoids (Table 1).

The first (control) group included 30 patients who were treated according to a closed hemorrhoidectomy by the standard method. The second group (basic) included 30 patients who were treated with the help of a latex ring.

The third group included 15 patients. In this group

they were made trans-anal disarterization of internal hemorrhoids under doppler control with mucopexy and lifting. The operation was performed with the use of the apparatus by firm AMI (Austria) and a special nozzle RAR-2013 and modified Anoscopy Moricorn-RAR-2011. We used suture Polysorb 2/0 with needle 5/8 circle, with a length of needles 27 mm. Operation was performed in the standard position under spinal anesthesia. Injected Proctoscope Moricorn-RAR-2011 RAR-c nozzle 2013, performed a diagnostic Doppler, where were diagnosed six permanent arteries located at 1, 3, 5, 7, 9 and 11 hours suspended on the dial, and in 3 cases, the pulse was determined according to 8 and 10 hours (Figure 1).

Arteries suture ligation through a window od proctoscope isolated and ligated at 11 and 1 hour with atraumatic thread Polysorb 2 / 0.

Table 1. Characteristics of the groups of patients

	First group	Second group	Third group
Number of patients	30	30	15
Age			
min	30	34	23
max	59	54	53
average	45,5 ± 1,4	43,2 ± 1,7	43,1 ± 2,3
Sex			
men	25 (83,3 %)	24 (80 %)	13 (86,7 %)
women	5 (16,7 %)	6 (20 %)	2 (13,3 %)
Stage			
II stage	2 (7 %)	24 (80 %)	3 (20 %)
III stage	24 (80 %)	6 (20 %)	9 (60 %)
IV stage	4 (13 %)	0	3 (20 %)



Figure 1

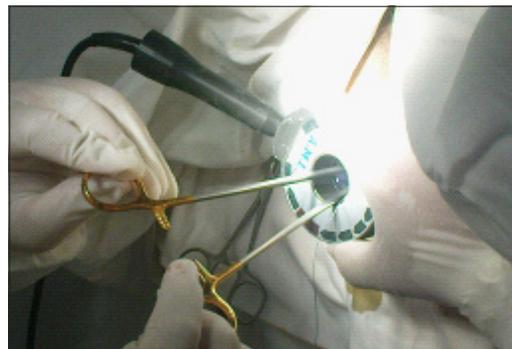


Figure 2

Then arteries were ligated at 7, 8, 9, 10 and 3.5 hours. Double figure-of-eight sutures “ligated” artery and at the same time squeezing extending of internal haemorrhoid tissue (Figure 2).

Mucopexy and lifting were performed with the device RAR-2013 transferred in the position “pexia”. The suture was made with thread Polysorb 2 / 0 from the proximal segment to the distal part, not reaching the level of dentate line to 5–6 mm. As a rule, the imposition of 3–5 stitches with the intervals 0,8–1,0 was required. Threads were tied holding mucosa. Similarly, lifting the entire perimeter of intestine, usually at 11, 6, 5 hours was performed. Operation was ended by applying the ointment “Levomekol” (Ukraine). Patients has been in hospital for two days. A low level of pain syndrome in the postoperative period was determined. It was reduced with the help of introduction of the medicine ketanova 1 ml. 3 times a day intramuscularly. In 6 hours after surgery, patients were completely movable. Isolation of blood and difficulties in urination were absent, the stool was called taking vaseline oil on 2–3 day 15 grams 3 times a day.

Statistical analysis

Statistical analysis was performed which using the program SPSS (v. 11., Chicago, IL). Digital data corresponding to the normal distribution, were represented as mediation with a standard deviation. For comparison

of treatment results Wilcoxon test for two dependent elections was used. The test was considered statistically significant at $p < 0,005$.

Results and discussion

Retrospective analysis of treatment results of patients was represented in Table 2.

The operation in the first group lasted 35–40 min., in the second group operation lasted 7–9 min. (in average $7,9 \pm 0,4$ minutes), in the third group – 25–50 min. (in average $39,2 \pm 2,1$).

In the first group of patients during the first days after closed hemorrhoidectomy pain syndrome after defecation was noted. It was reduced by introducing 2 % solution of promedol or 1 % morphine solution. In the early postoperative period thrombosis of external hemorrhoids was observed in 2 patients. The lack of anal sphincter in the late postoperative period was marked in 3 patients. After a closed hemorrhoidectomy patients rose in 18 hours. The stool was on day 3. Wounds healed after operation on 17–18 days.

In the second group of patients in the postoperative period pain syndrom after defecation, was observed. It was cured by introducing a solution ketarola. In the early postoperative period the thrombosis of external hemorrhoids was noted in 1 patient. The stool was on the 2–3 day.

Table 2. Results of surgical treatment for chronic hemorrhoids

Symptoms	First group (n = 30)		Second group (n = 30)		Third group (n = 15)	
	Before	After	Before	After	Before	After
Loss of nodes	21 (70 %)	2 (6,7 %)	1 (3,3 %)	0	3 (20 %)	1 (6,7 %)
Bleeding	8 (26,7 %)	2 (6,7 %)	6 (20 %)	2 (6,7)	6 (40 %)	0
Pain after defecation	7 (23,3 %)	30 (100 %)	18 (60 %)	1 (3,3 %)	4 (26,7 %)	1 (6,7 %)
Itching	3 (10 %)	0	12 (40 %)	0	5 (33,3 %)	1 (6,7 %)
Thrombosis of external sites	8 (26,7 %)	2 (6,7 %)	2 (6,7 %)	1 (3,3 %)	0	4 (26,7 %)
The lack of anal sphincter	0	3 (10 %)	0	0	0	0

In the third group of patients in the postoperative period syndrom was noted after defecation in 1 case, which was cured by introducing a solution of ketarol. Sewing and ligating arteries at 11 and 1 hour performed technical difficulties. Intraoperative complications didn't occur. After the operation patients 6 rose in 6 hours. On the 2 day while examining the patients hemorrhoids was in a state of collapse. The stool was on day 3. Hospitalization lasted 1–2 days. Patients were examined in the early postoperative period of 2–3 days and in terms of 1, 6, 12, 16 months. Relapses didn't occur. Employability in the first group was $18,4 \pm 0,5$ days in the second group – $1,8 \pm 0,3$ days in the third – $1,3 \pm 0,3$.

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Conclusion

Hemorrhoidectomy according to Milligan-Morgan is considered as a radical means of treatment of hemorrhoids III–IV levels. After the operation pain syndrom is observed. It is cured with the help of medicine morphine. A high frequency of postoperative complications and long-term rehabilitation is also noted. Numerous modification of the method don't allow to achieve success in this direction. Applying of trans-anal disarterization of internal hemorrhoids under doppler control with mucopexy and lifting is an effective alternative to standard treatment. It allows to reduce temporary disability from $18,4 \pm 0,5$ days to $1,3 \pm 0,3$. Method ideal for the hospital one day and meets the requirements minimally invasive surgery.