

## Active Surgical Tactics in Treatment of Acute Hemorrhoidal Thrombosis

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### **Abstract:**

*Today, many aspects of the treatment of acute hemorrhoidal thrombosis are controversial. For many years, there are two opposite views on the treatment tactic in this complication of hemorrhoids. To improve the results of surgical treatment of patients with acute thrombosis of hemorrhoidal nodes based on the development of individual differentiate tactic according to the severity of disease. The results of treatment of 188 patients with acute hemorrhoidal thrombosis of different degree of severity were analyzed. Depending on the applied treatment tactics, all patients were divided into two groups. In the first (primary) group was applied individual-differentiated active surgical tactics (included 99 patients (52.7%)). Depending on the time of hemorrhoidectomy, have identified: urgent, early, delayed operations. In this group the complex of therapeutic measures was included antioxidant thiocetacid in the form of intravenous infusion 600 mg per day. In the second (control) group -89 (47,3%) patients, conservatively expectant management was used. In the main group postoperative complications were observed in 28 of 99 (28,3%) patients, in the control group - in 27 patients (30.3%). Duration of hospital treatment in the main group varied from 3 to 11 days, in control group ranged from 9 to 18 day. Activating the surgical treatment of acute hemorrhoidal thrombosis reduced the incidence of postoperative complications from 30.3% to 29% and the time of hospital treatment from 18 to 3 days.*

**Keywords:** Hemorrhoid, Acute, Thrombosis, Hemorrhoidectomy, Complications

### **1. Introduction**

Hemorrhoids is the most frequent reason to visit the coloproctologists or colorectal surgeons. More than 10% of adults people are suffer from hemorrhoidal disease. According to the Google's annual roundup in 2012 (Google Zeitgeist), hemorrhoids was the top trending health issue in the United State, ahead of gastroesophageal reflux disease and sexually transmitted disease [1], [5].

Estimates of the prevalence of symptomatic hemorrhoidal disease in the United States range from 10 million people, a 4.4% prevalence rate, to a National Center for Health Statistics report of up to 23 million people or 12.8% of U.S. adults [5]. Others have reported up to a 30–40% prevalence rate in the United States [11]. In Azerbaijan prevalence of hemorrhoids is about 30,1. According to data one of European investigations, Azerbaijan is included in the group of countries where hemorrhoidal disease is widely spread and about 29% of the population suffers from this disease. Many theories which are explained pathogenesis of hemorrhoids. The exact pathophysiology of hemorrhoids is poorly understood. In 1975 V.Thomson proposed a theory that summarized all the previous ones [2]. According to this theory hemorrhoids develop when the supporting tissues of the anal cushions disintegrate or deteriorate. Therefore hemorrhoids are the pathological term to describe the abnormal downward displacement of the anal cushions causing venous dilatation. Moreover, it was evident that hemorrhoidal tissue contained some inflammatory cells, newly-formed microvessels and smooth muscle fibers [3], [9]. The anal submucosal smooth muscle fibers (Treitz's muscle) originates from the conjoined longitudinal muscle. The anal cushions have been proposed to contribute to 15-20% of the resting anal canal pressure [9]. There are typically three major anal cushions, located in the right anterior, right posterior and left lateral aspect of the anal canal, and various numbers of minor cushions lying between them. This theory has promoted the development of pathogenic methods of surgical treatment of hemorrhoids. One of the most common and most serious complications of hemorrhoids is acute thrombosis of hemorrhoids (ATH). More than 50% of patients with chronic hemorrhoids are complicated by acute thrombosis, which can be repeated 2 to 6 times a year [3], [4], [7]. The period of temporary disablement during each exacerbation can be from 6 to 35 days. This may be a simplification, but hemorrhoids and its complications treatment has been a subject of consideration and discussion in the medical literature from the beginning of documentation of human disease that is for at least 4000 years. Probably, the problem of treatment of chronic hemorrhoidal disease has resolved and it depends on its severity. Most of colorectal specialists in the world agree that on advanced stages of hemorrhoids manual hemorrhoidectomy is still the gold standard [1], [6]. However, with regard to acute hemorrhoidal thrombosis, the situation is different. Today, many aspects of the treatment of acute thrombosis of hemorrhoids remain controversial. For many years, there are two opposite views on the treatment tactic this complication of hemorrhoids. Supporters of the conservative strategy consider that drug therapy is the method of choice. The authors explain their position with the high risk of postoperative complications, such as phlebotrombosis, thromboembolism and septic complications. Active surgical tactics in acute thrombosis of hemorrhoids began to be used by Western Coloproctologists in 80-90 years of the XX century [9]. In their opinion, emergent surgery does not deteriorate the incidence of complications, does not worsen the early and late results of treatment. But among the supporters of active surgical treatment there are many contradictions. When must be performed operation? Which operation should be carried out? Some surgeons perform thrombectomy, another specialists prefer hemorrhoidectomy. In daily practice use active surgical tactic to the patients with acute thrombosed hemorrhoids and in all cases perform hemorrhoidectomy.

The aim of study is to improve the results of surgical treatment of patients with acute thrombosis of hemorrhoidal nodes based on the development of individually differentiate tactic according to the severity of disease.

## 2. Method

The study is based on the analysis of the results of treatment of 188 patients with acute thrombosis of hemorrhoids of various degrees of severity, treated from 2004 to 2016. There were 145 men (77,1%) and 43 women (22,9%). The age of patients ranged from 18 to 82 years. I degree severity of thrombosis was in 21 patient, II degree in 49 and III degree thrombosis was observed in 29 patient. In complex examination by the conventional methods the study of lipid peroxidation (LPO) and antioxidant protection (AOP) were included. The condition of LPO was assessed by the level of diene conjugates (DC) and malondialdehyde (MAD), the state of AOP — by the level of catalase and glutathione. These parameters were studied in blood and rectal mucosa. The findings suggested that all patients with ATH had intensifying of LPO and weakening of AOS. Depending on the applied treatment tactics, all patients were divided into two groups. The first (primary) group included 99 patients (52,7%), which were under our observation from 2008 to 2016. Active surgical tactics was applied in this group. At the same time in this group the complex of therapeutic measures included antioxidant thiocetate in the form of intravenous infusion 600 mg per day. The medication preoperatively was administered to patients with grade of III thrombosis, but after operation was administered to all patients. Using antioxidant therapy in preoperative period at patients with advanced local inflammation promote quickly resolution of perianal edema, reduce the size of nodes. So give us an opportunity to perform early hemorrhoidectomy. Time of surgical operation and the choice of method hemorrhoidectomy was determined taking into account the severity of the disease, local inflammation signs. We have used active surgical tactic with individual approach to each patient. Depending on the time of hemorrhoidectomy we have identified:

Urgent operations- were performed in 57 patients (57,6%) within 3 days after admission

Early operations—were performed in 21 patients (21,2%) within 5-7 days after admission

Delayed operations- were performed in 21 patients (21,2%) in 9-11 days after admission

Urgent operations were performed in 57 patients with II (43 patients) and III (14 patients) grade degree of thrombosis. Of 57 patients semi-closed hemorrhoidectomy was performed in 32, closed hemorrhoidectomy- in 21. 4 patients were operated by classical Milligan-Morgan hemorrhoidectomy.

Of the 21 patients who performed early operations thrombosis II degree of severity was observed in 6, III degree in 15 cases. Semi-closed hemorrhoidectomy was applied to 13 patient, closed hemorrhoidectomy- to 2 and Milligan-Morgan hemorrhoidectomy to 6 patient.

Delayed operations was performed in 21 patients with I degree of thrombosis and all of these patients underwent closed hemorrhoidectomy.

The second (control) group included 89 (48.9%) patients who were treated from 2003 to 2007 years. In the treatment of these patients conservatively expectant management was used: patients were operated within 9-10 days after admission after resolution acute inflammation signs. Milligan-Morgan hemorrhoidectomy was performed in 43, semi-closed hemorrhoidectomy — in 35, closed hemorrhoidectomy — in 11 patients. In the control group the choice of timing and method of hemorrhoidectomy was conducted excluding the severity of the disease. In the pre- and postoperative periods traditional procedures were performed.

### **3. Results**

In the main group postoperative complications were observed in 28 of 99 (28,3%) patients. Early complications were observed in 25 patients: perianal swelling in 3, discharge of blood during a bowel movement in 10, difficulty in defecation in 9, bleeding from the surgical wound in 2 cases. Late complications (within 2 years after surgery) occurred in 3 patients: scar stricture of the anal canal in 2, the anal sphincter insufficiency of II degree in 1 patient. Patients with anal stricture treated with conservative measures, such as anal dilatations. In the case of anal incontinence we have performed surgical reconstruction of sphincter muscle. Duration of hospital treatment in the study group varied depending on the method of hemorrhoidectomy from 3 to 11 days.

In the control group, postoperative complications were observed in 27 patients (30.3%). There were 26 complications in the early postoperative period. In the late period in 1 patient stricture of the anal canal was observed. Duration of hospital treatment in control group ranged from 9 to 28 day.

### **4. Conclusion**

Acute hemorrhoidal thrombosis is accompanied by strengthening intensity of lipid peroxidation and the attenuation of the antioxidant protection. The choice of timing and method of hemorrhoidectomy should be determined differentially, taking into account the degree of thrombosis. In the cases of II and III degree thrombosis urgent and early operations should be applied. In patients with I degree severity of the disease delayed operation should be performed, the best option in this case is closed hemorrhoidectomy. The choice of the method of hemorrhoidectomy should be based on changes in the perianal tissues. Activating the surgical treatment of acute hemorrhoidal thrombosis reduces the incidence of postoperative complications from 30.3% to 28,3% and the time of hospital treatment from 11 to 3 days. The inclusion of an antioxidant in to the complex of therapeutic measures can reduce the incidence of postoperative complications, make shorter hospital treatment and work rehabilitation.

### **5. Discussion**

Our results show that complications rate after too opposite treatment tactics of acute hemorrhoidal thrombosis are approximately the same. This question may arise: what is the purpose of the study? The supporters conservative management avoid early surgical operations, because fear high rate of postoperative complications. The aim of the investigation is to analyze the results of early surgical treatment acute thrombosed hemorrhoids. So we don't want to decrease complications, want to see how they are more frequently after active surgical treatment. Results show that early surgical treatment does not increase complications rate in the postoperative period. Facilitates faster social and labor rehabilitation of patients, improving the quality of life.

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