

Comparison of Postoperative Complications between Urgent and Elective Closed Hemorrhoidectomy: A Prospective Study

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Abstract

Objective: To compare postoperative complications between urgent and elective closed hemorrhoidectomy in the following aspects: early bleeding and wound dehiscence.

Research design: prospective, non-randomized study

Methods: From May 1, 2003 to November 30, 2004, data of patients with prolapsed thrombosed hemorrhoid undergoing urgent hemorrhoidectomy were prospectively collected and compared with patients undergoing elective hemorrhoidectomy at the same period. Complications including early postoperative bleeding (within 1 week postoperatively) together with wound dehiscence (at week 2 and 4 post-operation) of the two groups were compared by Chi-square test.

Results: There were 46 patients in the urgent hemorrhoidectomy group and 54 patients in the elective hemorrhoidectomy group. No differences were found between two groups in gender, age, and number of hemorrhoids resected in each patient (urgent/elective hemorrhoidectomy at the ratio of 2.24 /2.17). In the urgent group, one patient experienced bleeding which ceased spontaneously. In the elective group, two patients had post-operative bleeding. One patient needed surgery to stop bleeding, in another patient bleeding stopped spontaneously. At week 2 post-operation, there were 5 (10.8 %) and 7 (11.7 %) wound dehiscences in the urgent and the elective group respectively, which is of no significant difference ($p = 0.120$). At week 4 post-operation, no new case of wound dehiscence was detected and all were completely healed.

Conclusion: There was no statistical difference in postoperative complications in term of early bleeding and wound dehiscence between urgent and elective hemorrhoidectomy.

Key words: wound dehiscence, urgent hemorrhoidectomy and prolapsed thrombosed hemorrhoid

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BACKGROUND

Though not a life threatening condition, prolapsed thrombosed hemorrhoid can cause severe, disabling pain, bleeding or even infection. There are two different ways to manage this condition; conservative treatment or urgent operation. The dilemma remains in fear of postoperative complications in urgent situation, ie. hemorrhage, anal stenosis and incontinence.¹⁻³ The technical aspects are also controversial, ie. closed or opened hemorrhoidectomy, general anesthesia, regional block or local anesthesia. At King Chulalongkorn Memorial Hospital, closed hemorrhoidectomy is performed under local anesthesia in both urgent and elective situation.

The objective of this study was to compare postoperative complications (early bleeding and wound dehiscence) between the urgent and elective hemorrhoidectomy in prospective, non-randomized fashion.

PATIENTS AND METHODS

Data of patients with prolapsed thrombosed internal hemorrhoid with or without external component who underwent hemorrhoidectomy within twenty-four hours after admission were collected from May 1, 2003 to November 30, 2004. The elective group consisted of patients with grade three or four internal hemorrhoid with or without external component who underwent hemorrhoidectomy during the same period. There were 48 patients in urgent group and 54 patients in elective group. Only 46 and 54 cases were completely followed in the first and the latter group, respectively. Gender, age, and number of hemorrhoids of the two groups were compared. The exclusion criteria included patients with previous anorectal operations, bleeding tendency, pregnancy, perianal infection and immunocompromised patient.

Operative technique

Patients were placed in prone jackknife position. Operations were performed under local anesthesia using 0.5% xylocaine with adrenaline 40 ml. (1% xylocaine 20 ml plus sterile water 20 ml). Perianal block was performed by gradual injection of the anesthetic agent, 10 ml. each, at 3, 6, 9 and 12 o'clock. A 3.2 cm-diameter modified Fansler's anoscope was

then used to inspect the hemorrhoidal tissue. Hemorrhoidal tissue was excised with metzenbaum and bleeding was stopped with electric cautery. Wounds were closed with 4-0 vicryl rapide® continuously. With this technique, the internal sphincter can be saved by the large size anoscope that stretches the sphincter away from the resected plane which lay more superficial in the submucosa. All patients were admitted for one day after operation. Postoperatively, patients were given oral acetaminophen around the clock and intramuscular Pethidine as requested. The surgical procedures were performed by colorectal staff and fellows (Figure 1 and Figure 2).

Wound care consisted of wound cleansing with shower after toilet and wearing napkin during the first



Fig. 1 Prolapsed thrombosed hemorrhoid

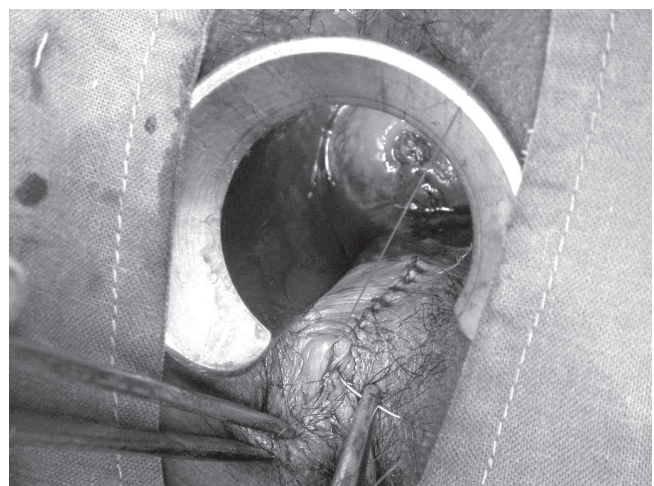


Fig. 2 Closed hemorrhoidectomy technique

few days. Warm sitz bath was prohibited. The early complications were recorded. Patients were followed up at 2 and 4 week after surgery by perianal examination and by anoscopy using 1-cm-diameter anoscope with xylocaine jelly. The intra-anal wound healing was inspected.

Definition

Bleeding: Massive or continuous bleeding that required packing or reoperation.

Wound dehiscence: The gap between the wound edges wider than 1 mm.

Statistical analysis

Chi-square test, Fisher's exact test, $p < 0.05$ was considered significant.

RESULTS

There was no difference in patients' characteristic (gender, age and number of hemorrhoids) between the two groups (Table 1). One patient in the urgent group experienced immediate bleeding which ceased spontaneously. Two patients in the elective group encountered postoperative bleeding. One patient needed re-operation, in another the bleeding stopped spontaneously.

At week 2 after operation, 5 wound dehiscences (10.8 %) were detected in the urgent group and 7 (11.7 %) detected in the elective group. All disruptions

occurred below dentate line. There is no statistical significant difference between the two groups ($p = 0.120$). At week 4 after operation, no new case of wound dehiscence was found and all wounds completely healed.

DISCUSSION

Prolapsed thrombosed hemorrhoid is one of the most frequently diagnosed complications of the hemorrhoidal disease. Despite of that, the management is still controversial. Firstly, what would be the optimal treatment; conservative or surgical management. Secondly, which would be the most appropriate surgical techniques; open or closed hemorrhoidectomy. And thirdly, what would be the best anesthetic method; regional or local anesthesia.

Conservative treatment was considered a safe option but patients may be suffering for a period of time and may need hospitalization. Greenspon et al.⁴ reported that conservative group needed 24 days for symptoms resolution but only 4 days in surgical group and the recurrent rate was 25.4% compared to 6.3 % in surgical group. Surgical treatment was considered to have high complication rate. However several studies^{1-3,5,6} have shown that hemorrhoidectomy is safe and effective for prolapsed thrombosed hemorrhoids and shortening those suffering experiences.

Eu KW, et al.⁷ retrospectively studied 704 patients with symptomatic prolapsed hemorrhoid. Five-

Table 1 Demographic data

| | Urgent group N = 46 | Elective group N = 54 | p value |
|-----------------------|--------------------------|--------------------------|---------|
| Mean age (years) | 42.54 | 44.52 | 0.529 |
| Sex | 12 : 11 (F:M = 24:22) | 11 : 7 (F:M = 33:21) | 0.151 |
| Number of hemorrhoids | 2.24 | 2.17 | 0.529 |

Table 2 Complications after hemorrhoidectomy

| | Urgent | Elective | p value |
|---|-----------|-----------|---------|
| Bleeding | 1 (2.17%) | 2 (3.70%) | 1.00 |
| Wound dehiscence at 2 week post-operation | 5 (10.8%) | 7 (11.7%) | 0.950 |
| Wound dehiscence at 4 week post-operation | - | - | - |

hundred patients underwent elective surgery for prolapsed hemorrhoid, and 204 patients underwent emergency hemorrhoidectomy for acutely prolapsed thrombosed and gangrenous hemorrhoids. The elective surgery group had 2% secondary hemorrhage, 1.2% blood transfusion, 3% anal stenosis, 5.2% incontinence and 6.9% recurrent hemorrhoids. For the emergency surgery group, the rates were 4.9%, 2%, 5.9%, 4.4%, and 7.6% respectively. There was no significant difference in postoperative complications between the two groups.

Ceulemans R, et al.³ retrospectively studied 104 patients who had emergency hemorrhoidectomy for strangulated hemorrhoids and 545 who had elective surgery. Late outcomes were similar for the two groups. They concluded that emergency hemorrhoidectomy was indicated for the treatment of the acute complications of hemorrhoid.

Some surgeons favored open hemorrhoidectomy technique (with scissors or diathermy)⁷⁻⁹. In our division, closed hemorrhoidectomy was routinely performed under local anesthesia. Usually, it seems like a big problem when facing with prolapsed thrombosed hemorrhoids. However, the hemorrhoidectomy technique is not different from the elective one. In this study, we compared the complications of closed hemorrhoidectomy in prolapsed thrombosed hemorrhoids (urgent hemorrhoidectomy) with the elective hemorrhoidectomy. The data showed no significant difference between the two groups.

The closed hemorrhoidectomy in this study was performed by several surgeons (fellows and colorectal staff), not by a single surgeon. The postoperative pain was not observed in this study because it is unjustified to compare the painful prolapsed thrombosed hemorrhoids with the elective surgical patients.

CONCLUSIONS

There was no difference in postoperative bleeding and wound dehiscence between the urgent and the elective hemorrhoidectomy. Complications of the urgent hemorrhoidectomy were comparable to the elective hemorrhoidectomy.

REFERENCES

1. Barrios G, Khubchandani M. Urgent hemorrhoidectomy for hemorrhoidal thrombosis. *Dis Colon Rectum* 1979; 22: 159-61.
2. Rosen L, Sipe P, Stasik JJ, Riether RD, Trimpi HD. Outcome of delayed hemorrhage following surgical hemorrhoidectomy. *Dis Colon Rectum* 1993; 36: 743-6.
3. Ceulemans R, Creve U, Van Hee R, Martens C, Wuyts FL. Benefit of emergency haemorrhoidectomy: a comparison with results after elective operations. *Eur J Surg* 2000; 166: 808-13.
4. Greenspon J, William SB, Young HA, Orkin BA. Thrombosed external hemorrhoids: outcome after conservative or surgical management. *Dis Colon Rectum* 2004; 47: 1493-8.
5. Mazier WP. Emergency hemorrhoidectomy - a worthwhile procedure. *Dis Colon Rectum* 1973; 16: 200-5.
6. Wang CH. Urgent hemorrhoidectomy for hemorrhoidal crisis. *Dis Colon Rectum* 1982; 25: 122-4.
7. Eu KW, Seow-Choen F, Goh HS. Comparison of emergency and elective haemorrhoidectomy. *Br J Surg* 1994; 81: 308-10.
8. Nieves PM, Perez J, Suarez JA. Hemorrhoidectomy - how I do it: experience with the St. Mark's Hospital technique for emergency hemorrhoidectomy. *Dis Colon Rectum* 1977; 20: 197-201.
9. Rasmussen OO, Larsen KG, Naver L, Christiansen J. Emergency haemorrhoidectomy compared with incision and banding for the treatment of acute strangulated haemorrhoids. A prospective randomised study. *Eur J Surg* 1991; 157: 613-4.