



Safety of surgical treatment of hemorrhoids in elderly patients

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ABSTRACT

Introduction: The aim of this study was to compare the outcomes following surgical treatment of hemorrhoids between elderly (≥ 60 years old) and young patients (< 60 years old).

Methods: A total of 365 patients who underwent surgical procedures for the treatment of third or fourth degree hemorrhoids between January 01, 2009 and January 31, 2014 were retrospectively screened.

Results: Among the 365 participants, 316 and 49 patients were younger and older than 60 years of age, respectively. No statistically significant differences with regard to the gender, operative duration, hospitalization time, incapacity to work, hemoglobin levels at admission or discharge, number of hemorrhoid packages, presence of thrombosis prior to the surgery, reoperation requirement, or the number of patients complaining of long-term pain were observed between the groups. Moreover, there was no statistically significant difference in the rate of early or late postoperative complications between the groups.

Conclusions: In conclusion, we found that the surgical treatment of hemorrhoids is equally safe in the younger and elderly patients. Therefore, surgeons can be confident in performing surgical treatment of hemorrhoids in elderly patients.

Keywords: hemorrhoids; elderly patients; surgical treatment; hemorrhoidectomy

INTRODUCTION

Hemorrhoids, vascular structures that extend from the subcutaneous arteriovenous vascular plexus in the anal region to the smooth muscle of the anal sphincter, are the most common cause of anorectal bleeding (1-3). Internal hemorrhoids are graded according to the extent of prolapse, and the grading

is particularly important in determining the treatment (4,5). First and second degree hemorrhoids are often successfully treated with oral medications combined with local treatments and modifications in daily diet. In addition, nonsurgical interventions such as sclerotherapy, cryosurgery, infrared coagulation, and rubber band ligation can be used for the treatment of first and second degree hemorrhoids. On contrary, surgical procedures are indicated for grade III and IV hemorrhoids (6,7).

As majority of patients with hemorrhoids remain asymptomatic, the true incidence of hemorrhoids is not completely determined. In a recent study

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involving 1,942 subjects who underwent routine health check-ups, the prevalence of hemorrhoids in the Koreans was 21.3–29.4% (8). Hemorrhoid-related complaints are reportedly responsible for up to 36% of the patients who seek care at general medical facilities (9).

The prevalence of hemorrhoids is increased among elderly patients. In a previous study involving 193 patients over 65 years old (mean age, 70.4 years), hemorrhoids were found to be one of the most common conditions in the elderly patients, with an incidence of 46.4% (10). However, older patients usually have comorbidities that increase postoperative morbidity and mortality rates. Therefore, decisions regarding the suitability of elderly patients for the surgical treatment can be challenging.

The aim of this study was to compare the outcomes following surgical treatment of hemorrhoids between older (≥ 60 years old) and younger patients (< 60 years old). To the best of our knowledge, this is the first study comparing the outcomes following surgical treatment of this common condition between elderly and younger patients.

METHODS

This retrospective study was conducted at Kocaeli Derince Education and Research Hospital in Turkey. The medical records of 365 patients who underwent surgical treatment of third or fourth degree hemorrhoids between January 1, 2009 and January 31, 2014, were retrospectively reviewed. The patient data were collected from the hospital records. Patients treated with the classical method or the Ligasure system were included in the study. The age, gender, total hospitalization time, incapacity to work, preoperative and postoperative hemoglobin levels, number of hemorrhoid packages prior to the surgery, presence of thrombosis, reoperation requirements, early (first 7 days) and late (1–6 weeks) complications, long-term postoperative pain, and analgesic requirements were recorded for each patient.

In our clinic, two hemorrhoidectomy methods are commonly used: the Milligan-Morgan hemorrhoidectomy and the LigaSure (Covidien, Forcetriad) procedure with controlled electrical energy. In the patients over 40 years, examination is routinely

performed before making the operation decision. A flexible proctosigmoidoscopy should always be used to exclude proximal inflammation or neoplasia. Colonoscopy should be used if the hemorrhoidal disease is unimpressive, in the case of uncharacteristic history, and in the patients 40 years of age or who have risk factors for colon cancer such as a family history. Depending on the degree of a disease, the treatment falls into two main categories: nonsurgical treatment and hemorrhoidectomy.

The patients were divided into two groups according to their age: patients younger than 60 years of age and patients older than or equal to 60 years of age. The recorded parameters were compared between the groups.

Statistical analysis

Data were analyzed using Predictive Analytics SoftWare (PASW) for Windows (version 18.0; Statistical Package for the Social Sciences (SPSS), Inc., Chicago, IL, USA). The chi-square test or Fischer's exact test was used to compare categorical data. For data with parametric distributions, the Student's t test was used to compare mean values between the two groups. Statistical significance was defined as $p < 0.05$.

RESULTS

Of the 365 participants, 316 were younger than 60 years and 49 patients were older. The mean age in the younger and older groups was 39.4 ± 10.1 and 66.7 ± 5.2 years, respectively. In the younger group, 183 (57.9%) patients underwent hemorrhoidectomy using the classical method and 133 (42.1%) were treated using the ligasure system. In the older group, 23 (46.9%) patients underwent hemorrhoidectomy using the classical method and 26 (43.1%) were treated using the ligasure system. No statistically significant difference in the treatment methods was observed between the groups ($p = 0.17$).

General patient characteristics and outcomes following hemorrhoidectomy of all the participants are summarized in Table 1. No statistically significant differences with respect to the gender, operative duration, hospitalization time, incapacity to work, hemoglobin levels at admission or discharge, number of hemorrhoid packages, presence of thrombosis

TABLE 1. General characteristics and outcomes of the hemorrhoid operations among the different age groups

	<60 years of age (n: 316)	≥ 60 years of age (n: 49)	p
Gender (F/M)	126/190	18/31	0.75
Methods (classical/ligasure)	183/133	23/26	0.17
Operation time (minutes)	17.94±5.73	17.78±6.77	0.85
Hospitalization time (days)	1.32±1.07	1.20±0.46	0.43
Incapacity to work (days)	6.79±3.37	6.79±4.60	0.99
Hgb g/dl (admission)	13.35±2.23	13.22±1.99	0.70
Hgb g/dl (discharge)	13.31±1.93	12.76±1.65	0.45
Number of packages	2.34±0.67	2.33±0.72	0.90
Presence of thrombosis before operation (%)	21 (6.6)	2 (4.0)	0.49
Reoperation (%)	6 (1.9)	1 (2.0)	0.99
Analgesia requirement (%)	249 (78.8)	40 (81.6)	0.65
Bleeding (%)	26 (8.2)	5 (10.2)	
Edema (%)	2 (0.6)	0	
Necrosis (%)	1 (0.3)	0	

Hgb - Hemoglobin

prior to the surgery, reoperation requirement, or the number of patients complaining of long-term postoperative pain were observed between the groups.

Early postoperative complications (within the first 7 postoperative days) in the younger group were as follows: 26 (8.2%) patients had postoperative bleeding; 1 (0.3%) patient developed necrosis; and 2 (0.6%) patients developed edema. Among the elderly patients, 5 (10.2%) had postoperative bleeding with no other early complications observed. Late postoperative complications (between postoperative weeks 1 to 6) were as follows: residual hemorrhoidal tissue, flatus incontinence, and anal stenosis developed in 13 (4.1%), 10 (3.1%), and 4 (1.2%) of the younger patients and in 3 (6.1%), 1 (2.0%) and 1 (2.0%) of the elderly patient(s), respectively. No statistically significant differences in the early or late postoperative complications were observed between the groups ($P = 0.17$).

Regarding additional operation requirements, lateral internal anal sphincterotomy was performed in 56 (17.1%) patients in the younger group and in 7 (2.2%) patients in the elderly group. Thrombectomy, fistulotomy, and polypectomy were required in 1 (0.3%), 17 (5.3%), and 3 (0.9%) patient(s) in the younger group, respectively.

Fistulotomy and polypectomy were performed in 2 (0.6%) and 1 (0.3%) patient(s) in the elderly group, respectively. No statistically significant difference in the additional operation requirements was observed between the groups ($P = 0.99$).

Analgesia was required in 249 (78.8%) patients in the younger group and in 40 (81.6%) patients in the elderly group, and no statistically significant difference was observed between the groups ($P = 0.65$). Anemia at admission, defined as hemoglobin levels lower than 12 g/dl, was observed in 70 (22.1%) patients in the younger age group and in 5 (10.2%) patients in the elderly group.

DISCUSSION

In the present study, we compared the outcomes following hemorrhoidectomy between elderly and younger patients. We determined that the surgical treatment of hemorrhoids was equally safe in both age groups. The operative duration, length of hospital stay, incapacity to work, and the number of patients with long-term postoperative pain were similar between the groups.

Approximately 50% of individuals aged 50 years or older receive hemorrhoid treatments, and 10%–20% of the treated individuals require surgery (11). Pain, itching, bleeding, and palpable or perceived abnormalities in the perianal region are the most common symptoms of hemorrhoids (12). Surgical treatment of hemorrhoids has been shown to improve the patient's quality of life (13). Conventional surgical hemorrhoidectomy, involving the excision of hemorrhoidal cushions, and the Ligasure vessel sealing system are the two most effective treatment modalities for hemorrhoids (14). Excessive postoperative pain, incontinence, and anal stenosis are reported in a considerable number of patients following hemorrhoid surgery (15,16). These complications are the most common drawbacks of the surgical treatment of hemorrhoids. However, we did not observe a high complication rate in the present study. Moreover, the complication rates did not differ between the younger and older patients. Postoperative pain is a serious clinical issue affecting patients undergoing surgical treatment for hemorrhoids (17). In the present study, we observed no significant differences in the rates of postoperative

pain or analgesia requirements between the younger and older patients.

Other complications following hemorrhoid surgeries, including acute urinary retention, postoperative bleeding, bacteremia and septic complications, wound breakdown, unhealed wounds, loss of anal sensation, mucosa prolapse, anal stricture, and fecal incontinence have been reported in the previous studies (18,19). However, these complications are uncommon and generally mild, and were not observed in the present study.

In a recent study, the operative duration of hemorrhoidectomy was reported as 18.7 ± 4.1 min, with the mean duration of hospital stay of 1.5 ± 0.6 days in the patients treated with the Ligasure hemorrhoidectomy (20). Milito et al. reported the mean duration of hospital stay of 1.8 days with the use of the Ligasure method and 1.3 days with the conventional hemorrhoidectomy. Furthermore, this study reported the operative duration of 9.2 min with the Ligasure and 12.1 min with the conventional hemorrhoidectomy (21). In another study, the mean duration of hospital stay was reported as approximately 1 day and the mean operative duration was approximately 30–31 min for both the Ligasure and conventional hemorrhoidectomy (22). The time required to return to normal daily activities following hemorrhoidectomy has been reported by different studies to be between 1 and 2 weeks (23). The operative durations and durations of hospital stays in the present study were comparable to the previous studies.

Seventy-five of the patients were found to be anemic, nevertheless, the underlying causes of anemia were not investigated in the present study. No statistically significant difference in the mean hemoglobin levels was found between the groups, although anemia was more common among the younger patients. Recovery from anemia following definitive treatment with hemorrhoidectomy is reportedly rapid during the second postoperative month (24), however, no significant difference in the mean hemoglobin levels before or after the treatment of hemorrhoids was observed in the present study.

There were a number of limitations to this study. The small sample size reduced the power of the quantitative analyses. Moreover, the follow-up times

were limited and the recurrence rates could not be determined.

In conclusion, we demonstrate that the surgical treatment of hemorrhoids is equally safe in elderly and younger patients. Surgeons can safely recommend these operations to elderly patients without any additional precautions. Larger studies of different surgical approaches with long-term follow-up of elderly patients are required to determine the effective management approach to this common condition in elderly patients.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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