



Abstract

Early Outcomes in Patients Treated with Stapled Hemorrhoidopexy

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Objective: In this study, we examined patients who underwent stapled hemorrhoidopexy (Longo procedure) because of stage 3 and 4 symptomatic hemorrhoids. We evaluated our clinical findings obtained from our patients with those from the literature and aimed to question the validity of this method.

Methods: Forty patients who underwent stapled hemorrhoidopexy between August 2014 and November 2015 in Eren Hospital and Kocaeli University School of Medicine Department of General Surgery were retrospectively analyzed. The demographic characteristics of the patients, other anal diseases, operation time, length of hospital stay, complications, and early recurrence rates were evaluated.

Results: Overall, 35 patients were men (87.5%) and 5 were women (12.5%). Their mean age was as 42.3 ± 2.1 years. Six (15%) patients had chronic anal fissures and 2 (5%) had anal polyps. The mean operation time was 25.4 ± 7.3 min, and the mean length of hospital stay was 24.5 ± 4.2 h (16–34 h). One patient (2.5%) underwent a reoperation on the postoperative first day because of bleeding. Four patients (10%) had urinary retention. Thirty (87.5%) patients were able to be followed up for six months postoperatively. Perianal fistulas occurred in one of these patients (3.3%). Stenosis, stricture, or recurrence was not detected in any patient at sixth months postoperatively.

Conclusion: The complication rates of stapled hemorrhoidopexy vary. Rectal perforation, stenosis, pelvic sepsis, and rectovaginal fistula are rare, but severe complications have been reported. However, stapled hemorrhoidopexy performed in experienced centers have acceptable outcomes in selected patients. This method is still a good alternative to other treatment methods.

Keywords: Stapled hemorrhoidopexy, longo procedure, hemorrhoid disease, perianal fistula

Introduction

Hemorrhoidal disease is quite common among benign anorectal diseases. Clinical methods such as lifestyle changes, medical therapies, band ligation, sclerotherapy, cryotherapy, and infrared photocoagulation are frequently used at its early stage, during which its symptoms do not disturb patients (1). Surgical treatment alternatives become prominent in patients not giving any response to conservative treatment and in those with advanced-stage hemorrhoidal disease. Stapler hemorrhoidopexy (SH) was first described by Longo in 1998 as an alternative to other methods for the surgical treatment of stage 3 and 4 hemorrhoidal disease and rectal mucosal prolapse (2). Although this technique is used commonly, it is still questioned in terms of its complications (3–6). Severe complications including anal stenosis, difficult defecation, bleeding, fistula, recurrent proctitis, and incontinence can decrease the level of interest shown for this method. In this study, we present our clinical experience gained from patients that underwent SH and analyze it in light of the available literature.

Methods

The files of 40 patients who underwent SH due to stage 3 and 4 symptomatic hemorrhoidal disease in the Clinic of General Surgery in Eren Hospital and in the Department of General Surgery in Kocaeli University between August 2014 and November 2015 were evaluated retrospectively. Patients' proctological examination findings obtained in the clinical evaluations at the 1st month, 3rd month, and 6th month after surgery were obtained from the hospital records. Before beginning the study, ethics approval was received from the local ethics committee. Information on identities and health conditions of the patients was protected in accordance with the criteria of Helsinki Declaration. The SH procedure and possible complications were explained to the patients before the process, and their written informed consents were received. For all patients, demographic features such as age and gender, other accompanying anorectal diseases at the time of admission, complaints, length of operation, length of hospitalization, and early recurrence rates were evaluated. The duration of surgery was considered as the period from the end of spinal anesthesia until the end of the process.

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Medical histories of the patients were obtained before surgery, and the patients were examined proctologically. Patients with anal fistula were excluded from the study. Surgeries were performed by two surgeons using the same technique. All interventions were performed after colon cleansing, under spinal anesthesia, in the jack-knife position, and using the Longo hemorrhoid set (Ethicon Endo-Surgery; Johnson & Johnson, Ohio, USA) (Figure 1, 2). It was found from the surgical records that an anoscopic evaluation was performed after firing the stapler and bleeding in the anastomosis line was stopped by using absorbable suturing material. The cases for which additional interventions for other accompanying anorectal diseases were added to the surgical procedure were also listed. Postoperative 12th hour Visual Analogue Scale (VAS) scores of the patients were obtained from the nursing care schedules.

Statistical Analysis

The data were analyzed using the SPSS 15.00 (SPSS Inc.; Chicago, IL, USA) software. The Mann–Whitney U-test was used for evaluating age, duration of surgery, and length of hospitalization. The results were presented as mean \pm standard deviation. Categorical variables were expressed as percentages.



Figure 1. Anal view before Stapler Hemorrhoidopexy



Figure 2. Anal view after Stapler Hemorrhoidopexy

Results

In the study sample, 35 of the 40 patients were male (87.5%), and the mean age was 42.3 ± 2.1 years. Considering the complaints of patients, bleeding was seen in 34 patients (85%), a palpable mass in 32 patients (82.5%), pain in 21 patients (52.5%), and itching in 24 patients (70%). Six patients (15%) had chronic anal fissure in addition to hemorrhoidal disease at the time of diagnosis. For these cases, lateral internal sphincterotomy was added to the surgical procedure. Accompanying anal polyps were removed with an ultrasonic dissector during SH in two patients (5%). The mean duration of surgery was 25.4 ± 7.3 min, and the mean length of hospitalization was 24.5 ± 4.2 hours. One patient (2.5%) was re-operated on due to leaking blood from the staple line, which did not require transfusion, on the postoperative 1st day. Hemostasis was provided with eight sutures. Postoperative urinary retention was treated by inserting a bladder catheter in four patients (10%) (Table 1). No recurrence or complication was observed in any patient in the 1st and 3rd months. Perianal fistula was seen in one (3.3%) of the 30 patients (87.5%) who came for a clinical examination in the 6th month. This patient was from the group undergoing sphincterotomy, and the external orifice of the fistula was in the location of the sphincterotomy incision. It was successfully treated with the application of elastic cutting seton. At the 6-month follow-up, no stenosis, stricture, chronic anal pain, or recurrence was found in any patient (Table 1). The mean VAS score of the patients was 3.6.

Discussion

The SH procedure, which is performed for stage 3 and 4 hemorrhoidal disease, offers short hospital stay and low complication rate when it is performed by experienced physicians. While the complaints of our patients at admission were similar to those reported in the literature, the finding of itching was 60%, which was higher than in literature (4, 5). The complaint of pain, which is seen very frequently after open hemorrhoidectomy, was observed to be less common after the SH procedure. The operation is performed in the rectal region, which is not sensitive to pain, and the absence of an open wound in the anal region is an advantage with regard to postoperative pain and wound care (4). In randomized controlled studies, postoperative pain was observed to be lower with SH than with conventional methods (7, 8). In our study, the postoperative pain score was 3.6. In the literature, the postoperative 12th hour VAS score was reported to be 2, which is a little bit lower than ours (9). The VAS score has also been demonstrated to decrease over time and to be below 2 on the 7th day (7). Rapid improvement of postoperative VAS score can be explained by faster recovery of the mucosa.

Table 1. Stapler hemoroidopeksi komplikasyonları

Complication	First 24 hours	1 st month	3 rd month	6 th month
Bleeding requiring reoperation	1 (2.5%)	-	-	-
Urinary retention	4 (10%)	-	-	-
Perianal fistula	-	-	-	1 (3.3%)

With regard to the length of operation and hospitalization, a shorter duration of surgery and hospitalization and earlier return to normal daily activities have been reported for SH compared to conventional techniques (10-12). The mean length of surgery is 9-35 minutes for SH (7). The definition of the length of operation varies in the literature, but the time decreases as the surgeon's experience increases (13). The mean length of hospitalization varies between 0.75 and 5.8 days (7). Compared to conventional hemorrhoidectomy, shorter hospitalization was reported for SH (14). This can be explained by faster recovery.

In the surgical procedure that was used with our sample, the anastomosis line was checked by touching and by anoscopic examination after firing the stapler. Leakages found during this process were stopped with eight sutures, and the anastomosis line was supported when necessary. Accordingly, these bleedings, which were intraoperatively detected and intervened, were not included in the complications. Although tampon implementation for post-operative hemostasis is seen in the literature, it is not frequently preferred because it increases the risk of urinary retention, causes pain, and has a risk of being caught onto the wires of the stapler (13). The rates of bleeding in the stapler line vary from 4.2% to 67% in the literature (11, 12, 15, 16). The rates of bleeding are high in some studies because they include bleeding that occurs after firing stapler and is brought under control when calculating the rates (15). When considered bleeding only as a complication, the rates of bleeding in literature are between 0.4% and 9.1%. These rates are similar to those for classical hemorrhoidectomy. As in all surgical interventions, efficient perioperative bleeding control contributes to obtaining low rates of hemorrhagic complication.

All patients in the study were operated on in the jack-knife position under spinal anesthesia. Urinary retention developed in four patients (10%), and it was treated with bladder catheter. The rate of urinary retention after hemorrhoidectomy is approximately 14.8% (17). The incidence of urinary retention after spinal anesthesia is reported to be between 0% and 69% (18). The type of anesthesia used in the operation is not always stated in the literature, but spinal anesthesia is the most commonly preferred (19). Because the risk of urinary retention increases with spinal anesthesia, excessive fluid hydration should be avoided.

Although rare, some frightening complications have been reported after SH. The major ones are pelvic sepsis, rectal perforation, obstruction, and rectovaginal fistula (20-22). However, these rare complications only develop when the rectal wall is included in the stapler line as a whole layer or when sutures are passed through the entire wall. Thus, these complications are closely associated with surgical technique. Another important late complication is persistent anal pain, which has been reported to occur at the rate of 16% (22). These situations, which can require re-operation, are related to firing the stapler near the dentate line. Such complications can cause a more cautious attitude toward the technique. It is possible to avoid these complications, which can be fatal, through efficient surgical technique and experience. In our study, perianal fistula was detected in the postoperative 6th month in one of the patients who simultaneously underwent lateral internal sphincterotomy with SH. The rate of anal fistula development after lateral internal sphincterotomy is approximately 0.09% (23). In this patient, who was treated with elastic cutting seton, the presence of the external orifice of the fistula in the location of the sphinc-

terotomy incision shows that this situation can be a complication associated with sphincterotomy.

One of the most important components for the efficiency and success of the technique is the rate of recurrence. Compared to conventional techniques, there are some studies demonstrating either that there is no difference in terms of hemorrhoidal disease recurrence or that the development of recurrence is lower in SH (4, 10). However, other studies show that SH has higher recurrence rates than conventional methods despite its significant advantages (24). In our study, no recurrence was observed in any patient. However, the facts that the length of follow-up was restricted to 6 months and that only 35 of the patients (87.5%) were followed up through this period are the limitations of the study with regard to the rate of recurrence and late complications. Therefore, the importance of studies on larger series and with longer follow-ups is clear.

Conclusion

In conclusion, SH remains a good treatment alternative to conventional methods owing to its success rate at early stage and its low complication rate, particularly when applied in selected patients and in experienced clinics.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Kocaeli University.

Informed Consent: Written informed consent was obtained from patients who participated in this study.

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