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Short And Long Term Results Of Stapled Hemorrhoidectomy

Stapler Hemoroidektomi Tekni inin Erken Ve Geç Dönem Sonuçları

SUMMARY

Purpose: Stapled hemorrhoidectomy is an alternative surgical technique in hemorrhoid treatment. We studied the early and long term results of stapled hemorrhoidectomy.

Material and Methods: Between January 2000 and December 2009, 44 patients (33 men and 11 women) with an average age of 43 years (range 25 to 72) underwent stapled hemorrhoidectomy for third or fourth degree hemorrhoids in Vakıf Gureba Training Hospital. Data about pre and postoperative symptoms, operation details, early and late term complications, length of hospital stay and patient satisfaction scores were collected. Statistical data is evaluated with SSPS 13 for windows.

Results: Hemorrhoids were third degree in 30 patients (68.1%) and fourth degree in 14 patients (31.9%). Rectal bleeding was the most common preoperative symptom [n=39 (88.6%)]. The other symptoms were perianal swelling [n=11 (25%)], pain [n=10 (22.7%)] and itching [n=2 (4.5%)]. Six patients were operated with findings of chronic anemia. Operation time was ranged between 15 to 75 minutes (average 26 minutes). There were no perioperative complication. Haemostatic sutures for mucosal bleeding were needed in 30 cases (68.1 %). Postoperative problems were observed in 14 patients. The most common problem was urinary retention which has been detected in 8 patients.

Conclusion: Stapled hemorrhoidectomy is safe, effective surgical technique with low complication rates. It can be performed in ambulatory setting. The haemostatic suturing after firing of stapler is needed and advised.

Key words: Stapled hemorrhoidectomy, complications, ambulatory surgery

ÖZET

Amaç: Stapler hemoroidektomi hemoroid tedavisinde alternatif bir yöntemdir. Bu çalışmada stapler hemoroidektomi tekni inin erken ve geç dönem sonuçlarını inceledik.

Yöntem ve Gereç: Ocak 2000 ile Aralık 2009 tarihleri arasında Vakıf Gureba E itim ve Ara tırma Hastanesinde 44 hastaya (33 erkek 11 kadın) 3 ve 4. derece hemoroid nedeni stapler hemoroidektomi uygulandı. Ortalama ya 43 (25-72 arası) idi. Preoperatif ve postoperatif semptomlar, operasyon bilgileri, erken ve geç dönem komplikasyonlar, hastane yatı süresi ve hasta memnuniyet skorları de erlendirildi. Kayıt edilen bilgiler SSPS 13 for Windows programı ile de erlendirildi.

Bulgular: Hemoroidlerin 30'u (%68.1) 3. evre 14'ü (%31.9) 4. evre idi. En sık preoperatif semptom [n=39 (%88.6)] rektal kanama olarak bulundu. Di er semptomlar; perianal i lik [n=11(%25)], a rı [n=10 (%22.7)] ve ka ıntı [n=2 (%4.5)] idi. Altı hasta kronik anemi bulguları ile opere edildi. Ameliyat süresi 15 ile 75 dakika arasında de i mekteydi (ortalama; 26 dakika). Perioperatif komplikasyon görülmedi. Otuz hastada (% 68.1) mukozal kanama nedeni ile hemostatik suture uygulandı. Ondört hastada postoperatif problemler görüldü. En sık postoperatif problem 8 hastada tespit edilen idrar retansiyonuydu.

Sonuç: Stapler hemoroidektomi dü ük komplikasyon oranları ile etkin ve güvenilir bir cerrahi yöntemdir. Günübirlik cerrahi olarak uygulanabilir. Staplerin ate lenmesi sonrası mukozal kanama varlı ında hemostatik suture uygulanması önerilir.

Anahtar Kelimeler: Stapler hemoroidektomi, komplikasyonlar, günübirlik cerrahi

INTRODUCTION

Hemorrhoidal disease is a common problem in surgical practice. It is present in about 10% to 25% of adult population. While the first and second degree hemorrhoids are managed with medical measures, third and fourth degree hemorrhoids are usually treated with surgery. Milligan Morgan and Ferguson

hemorrhoidectomy techniques are the most commonly performed surgical procedures for hemorrhoidal disease. Stapled hemorrhoidectomy was presented by Antonio Longo in 1998 (1), especially for the treatment of hemorrhoidal disease with external mucosal prolapsus. When compared to other techniques, it causes less postoperative pain, shortens the hospital stay and associated with higher patient satisfaction rates. As a relatively novel procedure, long-term results are not well established with this technique. Hemorrhage, urinary retention, perineal ecchymosis are the most commonly encountered problems in early postoperative period. It is feared complications as anal incontinence and stenosis in long term follow-up. In this retrospective study, we were analyzed the early and late term results of stapled hemorrhoidectomy technique.

MATERIAL AND METHODS

The study was conducted in the Department of General Surgery, Vakıf Gureba Training Hospital, Istanbul, Turkey. Between January 2000 and December 2009, 44 patients (33 men and 11 women) with median age of 43 years (range 25 to 72) underwent stapled hemorrhoidectomy for the third or fourth degree hemorrhoids (Table 1). Patients were questionnaire for their symptoms and proctologic examination was included. Rectosigmoidoscopy was performed to all patients. All patients were informed about operative technique (stapled hemorrhoidectomy) before surgery. The operations were performed by surgeons experienced in this technique. Patients were operated with general or spinal anesthesia in lithotomy position. Cefazolin 1 gr was given intravenously at the time of anesthesia. After placement of purse string with 0 polypropylene about 3-4 cm from the dentate line, 33 mm circular stapler (PPH 33 mm, Ethicon, Endo-Surgery, Ohio, USA) was fired. The stapler was kept closed 30 to 60 second for bleeding control. If hemorrhage was detected after stapling process, haemostatic sutures were taken with 3-0 Vicryl to stop bleeding. Resected tissue was sent for histopathological examination in all cases.

The pain control in postoperative period was achieved with intravenous 100 mg ketoprofen twice a day and 1.0 g dipirone was given orally as required. The patients were discharged in same day if there were no complication or intractable pain. They were controlled with proctologic examination at 1, 4, 12 and 54 weeks after the operation. While all of the patients were followed up 1, 4 and 12 weeks in controls, 31 of 44 patients could be evaluated in 54 weeks.

Table 1- Characteristics of patients

Characteristic	Number	%
Number	44	
Male/Female	33/11	75/25
Mean Age	43	
Hemorrhoid stage		
Grade 3	30	68.1
Grade 4	14	31.9

Pain measurement

The pain intensity in postoperative period was quantified with a 10 cm visual analogue scale (VAS). The patients were asked the 'How severe is your pain now?' and please use a pen and draw a vertical mark on the line below to indicate the average amount of pain or discomfort you felt (Figure 1). The zero was a state without any pain and ten was most intense pain imaginable.

Data about pre and postoperative symptoms, operation details, postoperative VAS scores, early and late term complications, length of hospital stay and patient satisfaction scores were collected. Patient satisfaction score was established with asking to rate the operation as excellent, good, fair or poor.

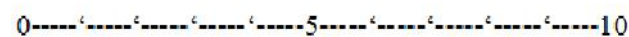


Figure 1- Pain intensity was measured with VAS in a horizontal line. The patients were marked or degreed their pain intensity according to this scale.

Statistics

The median values were evaluated with SSPS 13 statistical program for windows.

RESULTS

Hemorrhoids were staged as third degree in 30 patients (68.1%) and fourth degree in 14 patients (31.9%). Rectal bleeding was the most common preoperative symptom (88%) followed by perianal swelling (25%), pain (22.7%) and itching (4.5%) (Table 2). Six patients were operated with findings of chronic anemia. Mean operation time was 26 minutes, ranging in between 15 to 75 minutes. There were no intraoperative complications but haemostatic sutures were used in 30 cases (68.1%) due to mucosal bleeding. Postoperative problems were detected in 14 patients (Table 3). Three patients were seen with early postoperative bleeding. The bleeding was controlled with local measures in two patients. Urinary retention was detected in 8 patients. One patient was suffered from recurrence of prolapsus two years after surgery.

Table 2- Preoperative symptoms of 44 patients

Symptom	Number of patients	%
Bleeding	39	88.6
Perianal swelling	11	25
Pain	10	22.7
Itching	2	4.5

Table 3- Postoperative complications

Complication	n=number	%
Bleeding	3	6.8
Urinary retention	8	18.1
Persistent pain	2	4.5
Prolapsus recurrence	1	2.2

He refused the second operation. There was persistent perianal pain in two patients. They were treated with analgesics. There was no anal stenosis or incontinence after surgery. Patients VAS scores were shown in (Figure 2). The mean hospitalization time was 38 hours (range 12 to 96 hours). Thirty patients were discharged within 24 hours after surgery. Fifteen patients were reported excellent results, 19, a good results, 6, fair results, and 4, a poor result in controls (Figure 3).

DISCUSSION

Hemorrhoids are cushions of fibrous and vascular tissue at the anal canal and they become symptomatic when mucosal prolapsus occur. Various surgical techniques have been presented to treat hemorrhoids up to date. Conventional hemorrhoidectomy techniques described by Milligan Morgan and Ferguson (2, 3) were used widely in the world. These techniques are relatively safe and effective. But they also have some disadvantages like postoperative pain, increase in duration of hospitalization and anal stenosis (4).

Stapled hemorrhoidectomy was introduced as an alternative surgical procedure to treat hemorrhoids. According to the early reports (5, 6, 7), it causes less postoperative pain, decreases duration of hospitalization and supports the early return to work. Relative expensiveness of stapler device is an important disadvantage of this technique. Intraoperative and postoperative hemorrhages are well-known complications after hemorrhoidal surgery. Bikhchandani et al. (8) reported 10% bleeding in stapled line after stapled hemorrhoidectomy. Longo (1) had been reported that 3.4% of their patients complicated with hematoma formation in the perianal region. Thirty patients in our series were needed haemostatic sutures after stapling process. All of the mucosal bleedings were stopped

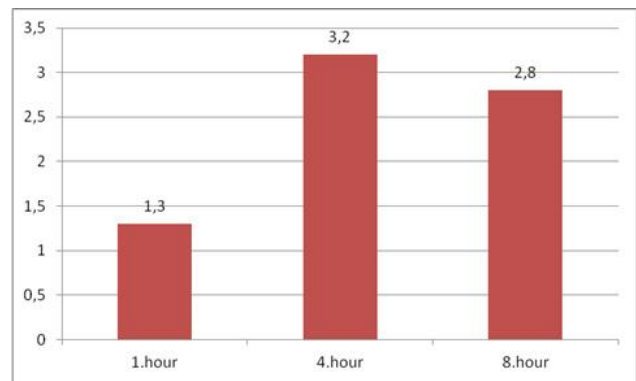


Figure 2- The median (VAS) scores after surgery

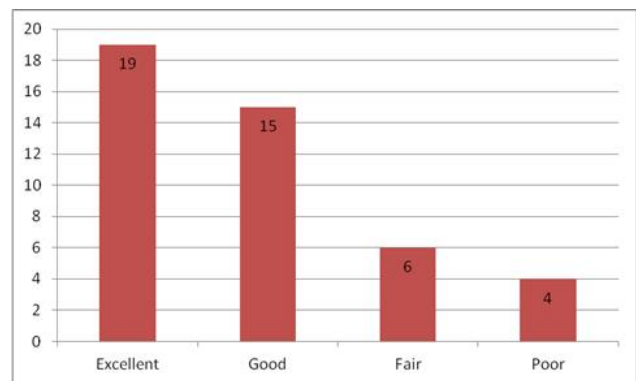


Figure 3- Patient satisfaction with stapled hemorrhoidectomy

after suturing. Severe arterial bleeding was detected in two patients in 1 and 6 hours postoperatively. They were treated with arterial ligation under local anesthesia. It is important to control the suture line after firing of the stapler. Thus, most of the early postoperative mucosal bleedings can be prevented.

Urinary retention is one of the most common problems after hemorrhoidectomy. Zaheer et al. (9) reported that urinary retention was detected in 34% of their patients after conventional surgery. Urinary retention was also developed in eight of our patients (18.1%) and successfully treated with indwelling catheter. It was believed that urinary retention after hemorrhoidectomy is correlated with postoperative pain. While the stapled hemorrhoidectomy results in less postoperative pain, it may decrease the incidence of urinary retention.

Surgical trauma to the highly sensitive anal mucosa and perianal skin triggers noxious pain stimulus. Conventional hemorrhoidectomy techniques usually disturb the anatomical planes in perianal region, causing postoperative pain. Absence of open wound in the perianal region in stapled hemorrhoidectomy is associated with incidence of severe pain. All of our patients were free of serious pain with routine analgesia. Only two patients were needed extra

Table 4 - Some important studies comparing stapled hemorrhoidectomy with conventional hemorrhoidectomy in last five years in literature.

Author	Year	Patients (n)	Advice
1- Ho KS	2006	50	SH
2- Huang WS	2007	596	SH
3- Mattana C	2007	100	MM
4- Stolfi VM	2008	181	SH/MM
5- Sgourakis G	2008	926	SH

*(SH-Stapled hemorrhoidectomy, MM-Milligan-Morgan)

administration of analgesics for pain relief.

Anal incontinence, stricture, rectal perforation and perianal sepsis are serious complications that were reported after stapled hemorrhoidectomy (10, 11, 12). We could not detect any of these complications in our patients.

Mean hospital stay was 38 hours (ranged 12 to 96 hours) in this study. Most of our patients were discharged within 24 hours after surgery. Rowsell M. et al. (5) were compared the stapled hemorrhoidectomy with conventional hemorrhoidectomy techniques and found a shorter hospital stay for the stapled hemorrhoidectomy group. Patient satisfaction is an important parameter after hemorrhoid surgery. Arnaud JP. (4) reported that 95.7% of their patients were satisfied with the stapled hemorrhoidectomy. The satisfaction rate was 80% in our serial. Decreased pain and early return to work were main factors for satisfaction in our patients.

Although the benefits of short term results of stapled hemorrhoidectomy is clear, the long term results are debated. Several studies have been compared the conventional hemorrhoidectomy with stapled technique (13, 14). We have showed the clinical studies that compared the two techniques in last five years (Table 4). Giardano P. et al. were conducted a meta analysis with 15 studies comparing conventional and stapled hemorrhoidectomy techniques (15). The outcomes were analyzed at a minimum of 12 months of follow-up. They stated that, short term advantages of stapled hemorrhoidectomy were obvious in terms of safety and postoperative complications but it carries a significantly higher risk for recurrence of prolapsus. The recurrence was detected in only one patient in our study.

The results of this report suggest that stapled hemorrhoidectomy is safe, effective surgical technique with low complication rates. It can be

performed in ambulatory setting. The haemostatic suturing after firing of stapler is needed and advised. The one of the important disadvantage of this technique is relatively high cost of the stapler device. It is especially important for developing countries but decrease in hospital stay and early return to work may abolish this disadvantage. Although initial series reported that complication rates after stapled hemorrhoidectomy was low in early postoperative period, there is sustained controversy in long term results of stapled hemorrhoidectomy. The early and long term results of stapled hemorrhoidectomy were encouraging in this serial.

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