

Single center experience in perianal fistula surgery

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Abstract

Aim: Perianal Fistula is the chronic stage of anorectal infection and is characterized by intermittent pain associated with purulent drainage or abscess formation followed by spontaneous abscess drainage.

In this study, we aimed to investigate the recurrence rates according to the type of surgery performed for patients who underwent surgery for perianal fistula.

Material and Methods: The records of 201 patients who underwent surgery in our hospital between the dates of January 2015 and May 2018 were analyzed retrospectively. In addition to the demographic information of the patients included in the study, their complaints, localization of the fistula, type of surgery performed, length of stay in the hospital, postoperative complications, and imaging methods were recorded. Loose or incisional seton stitch, fistulotomy and fistulectomy were performed according to the localization and the type of fistula. The seton stitch method was applied to complex fistulas, and the fistulotomy and fistulectomy methods were applied to simple fistulas.

Results: Of the patients included in the study, 178 (88.5%) were males and 23 (11.5%) were females. Their mean age was 41.65 (27-77) years. Of the patients, 136 (67.7%) had complex and 65 (32.3%) had simple fistulas. The fistulas were intersphincteric in 90 (44.8%) patients, transsphincteric in 51 (25.4%) patients, suprasphincteric in 33 (16.4%) patients, and extrasphincteric in 27 (13.4%) patients.

Conclusion: The complications and recurrence rates were found to be low postoperatively in all types of surgical procedures performed in our clinic. No statistically significant difference was found between the type of surgery and the recurrence rate.

Keywords: Perianal Fistula; Surgery; Complication.

INTRODUCTION

Perianal Fistula is the chronic stage of anorectal infection and is characterized by intermittent pain associated with purulent drainage or abscess formation followed by spontaneous abscess drainage (1). Although the anal fistula is a benign disease, it causes anal incontinence and recurrences after surgery when it is complicated. Despite the provision of temporary relief with antibiotics and analgesics in the acute phase, surgery is the definitive treatment of the disease (2). The main purpose of fistula surgery is the permanent healing and the maintenance of anal continence. But no treatment method could be found which completely achieves these two goals. While attempts to achieve permanent healing lead to incontinence, methods to maintain continence increase the rate of recurrence.

Seton (loose or cutter), fistulotomy, and fistulectomy

are the conventionally applied surgical methods (2). The treatment varies according to the place of fistula, and whether the disease is simple or complicated. The treatment is easy and the rate recurrence and incontinence development risk is low in simple fistulas, while the complication risk is high in complex fistulas (3).

In this study, we aimed to investigate the recurrence rates according to the type of surgery performed for patients who underwent surgery for perianal fistula.

MATERIAL and METHODS

The records of 201 patients who underwent surgery in our hospital between the dates of January 2015 and May 2018 were analyzed retrospectively. In addition to the demographic information of the patients included in the study, their complaints, localization of the fistula, type of surgery performed, length of stay in the hospital,

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postoperative complications, and imaging methods were recorded. The grouping method described by Parks et al. was used for the perianal fistula classification (4) (Table 1). The patients were compared in terms of the rate of recurrence, type of surgery, and localization.

Table 1. Parks classification in perianal fistulas

1. Intersphincteric (50%): Limited with the perianal area.
2. Transsphincteric (30%): Holds at least one part of the external sphincter.
3. Suprasphincteric (15%): It passes over the external sphincter and puborectal muscle and reaches the ischiorectal distance.
4. Extrasphincteric (5%): These are the fistulas that start from the rectum and reach the ischiorectal distance and skin over the levator muscles.

The diagnosis of fistula was made with the history of the presenting complaint and physical examination as well as the lower abdomen magnetic resonance imaging (MRI). The patients who applied during the acute phase were administered antibiotherapy and analgesics, and the operations were performed electively. The operations of the patients were performed at lithotomy and jack-knife positions. All patients were administered 2 g 1st generation cephalosporin as the prophylactic antibiotherapy and oral cephalosporin during the discharge. The inner orifice part of the fistula was found by a stile. In those that could not be found by the stile, the inner orifice was found by giving the serum physiologic or the methylene blue. Loose or incisional seton stitch, fistulotomy and fistulectomy were performed according to the localization and the type of fistula. The seton stitch method was applied to complex fistulas, and the fistulotomy and fistulectomy methods were applied to simple fistulas. The patients were discharged on the postoperative 1st day. Those who were applied incisional seton were called to the outpatient clinic and their setons were tightened up once again. Other patients, however, were called for control by the end of the 1st week.

Statistical Analysis

The collected data were analyzed with Statistical Package for Social Sciences (SPSS 20 for Windows, SPSS Inc., Chicago, Illinois, USA) computer program. The Chi-square or Fisher tests were used in the comparison of the nominal data (when the values observed in the cells do not meet the assumptions of the Chi-square test). Situations when p-value is <0.05 were accepted to be statistically significant.

RESULTS

Of the patients included in the study, 178 (88.5%) were males and 23 (11.5%) were females. Their mean age was 41.65 (27-77) years (Table 2). Of the patients, 136 (67.7%) had complex and 65 (32.3%) had simple fistulas. The fistulas were intersphincteric in 90 (44,8%) patients, transsphincteric in 51 (25.4%) patients, suprasphincteric in 33 (16.4%) patients, and extrasphincteric in 27 (13.4%) patients (Table 3).

Of the patients, 136 (67.7%) were applied fistulotomy and curettage followed by seton, 42 (20.9%) were applied fistulotomy and curettage, and 23 (11.4%) were applied fistulotomy alone. The mean follow-up time of the patients was 17.1 (6-24) months. During this time, recurrences occurred in 27 (13.4%) patients. Recurrences occurred in 6 (14.2%) patients in the fistulotomy group, 4 (17.4%) in the fistulectomy group, and 17 (12.5%) in the seton group (Table 4). The Chi-square test was applied to determine whether there is a relationship between these recurrences and the type of surgery or not. In conclusion, there was no statistically significant relationship between the type of surgery and the recurrences (p=0.803). Of the patients, 11 (5.4%) applied with recurrent fistula and underwent a fistula surgery for the second time. All these patients had undergone the seton procedure. Wound infections occurred in 5 of all patients. Temporary gas incontinence was seen in 3 patients who were applied seton, but there was no patient who had permanent incontinence.

Table 2. Demographic characteristics of patients

age range	male(n)	female(n)	(total)
20-29	10	3	13
30-39	46	2	48
40-49	65	9	74
50-59	33	5	38
60-69	17	4	21
70-79	7	-	7
Total	178	23	201

Table 3. Localizations and types of perianal fistulas

Localization	n	male	female	%(total)
Simple	65	53	12	32,3
Complex	136	125	11	67,7
Intersphincteric	90	83	7	44,8
Transsphincteric	51	45	6	25,4
Extrasphincteric	33	27	6	16,4
Extrasphincteric	27	23	4	13,4
Total	201	178	23	100

Table 4. Localizations and types of perianal fistulas

Type of Surgery	n(m/f)*	recurrence (n)	recurrence ratio %(total)	p-value
Seton stitch	136 (125/11)	17	12,5	p=0.803
Fistulotomy	42(35/7)	6	14,2	
Fistulectomy	23(18/5)	427	17,4	
Total	201(178/23)		13,4	

*m: male, f: female

DISCUSSION

Perianal fistulas are seen with chronic inflammation

accompanied by defluxion and pain. The treatment targets the control of infection, closure of the fistula, and preservation of continence (5). In addition to seton application, fistulectomy, and fistulotomy, new methods such as ligation of the intersphincteric fistula tract (LIFT) and video-assisted anal fistula treatment (VAAFT) have been recently introduced among the treatment methods (6).

Fistulas are anatomically classified as suprasphincteric, extrasphincteric, transsphincteric, or intersphincteric according to the internal and external sphincters. Besides, they are classified as simple or complex according to the number of outer mouths or localization. In a study of 400 patients by Parks et al., it was shown that 45% of fistulas were intersphincteric, 30% were transsphincteric, 20% was suprasphincteric, and 5% was extrasphincteric (4). In the present study, 136 (67.7%) patients had complex, and 65 (32.3%) had the simple fistula. Of the patients 90 (44.8%) had intersphincteric, 51 (25.4%) had transsphincteric, 33 (16.4%) had suprasphincteric, and 27 (13.4%) had extrasphincteric localization.

The success rate in perianal fistula surgery has a wide range according to the method applied. In addition to the surgical method, the localization and type of the fistula, and whether it is complex or not affecting the surgical success. In a study by Çolak et al., the rate of recurrence in complex fistulas was found as 24.6% (3). Again, in a study by Lenter et al., the rate of recurrence was reported as 3.7% (7). In the present study, the postoperative recurrence rate was found as 13.4%. There was no statistically significant difference between the type of surgery and the rate of recurrence.

Anal incontinence is the most important one among the perianal fistula complications after surgery. The postoperative incontinence is less common in simple fistulas but more common after complex fistula operations. The continence problem is often seen as transient and gas incontinences. The watery stool incontinence was the second frequent case, while the hard stool incontinence was quite rare (8). In the study by Lenter et al., the

incontinence rate was 0.9% (7), while in the study by Polat Y. et al., the incontinence rate was reported as 0.8%. In the present study, transient gas incontinence was observed in three patients, while there was no permanent incontinence.

CONCLUSIONS

In conclusion, the complications and recurrence rates were found to be low postoperatively in all types of surgical procedures performed in our clinic. No statistically significant difference was found between the type of surgery and the recurrence rate.

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REFERENCES

1. Whiteford MH, Kilkenny J 3rd, Hyman N, et al. Practice parameters for the treatment of perianal abscess and fistula-in-ano (revised). *Dis Colon Rectum* 2005;48:1337-42.
2. Zeren S, Sobutay E, Ağca B, et al. Perianal fistüllerde cerrahi tedavi deneyimlerimiz retrospektif çalışma. *Okmeydanı Tıp Dergisi* 2011;27:76-8.
3. Çolak E, Özlem N, Keşmer S, et al. Perianal fistülde ameliyat yönteminin nüks ve inkontinans üzerine etkisi. *Kolon Rektum Hastalıkları Dergisi*. 2015;25:91-5.
4. Parks AG, Gordon PH, Hardcastle JD. A classification of fistula in ano. *Br J Surg* 1976; 63:1-12.
5. Alasari S, Kim NK. Overview of anal fistula and systematic review of ligation of the intersphincteric fistula tract (LIFT). *Tech Coloproctol* 2014;18:13-22.
6. Sheikh P, Baakza A. Management of Fistula-in-Ano-The Current Evidence. *Indian J Surg*. 2014;76:482-6.
7. Lentner A, Wienert V. Long-term, indwelling setons for low transsphincteric and intersphincteric anal fistulas. Experience with 108 cases. *Dis Colon Rectum* 1996;39:1097-101.
8. Polat Y, Sarıçık B. Can be used the nylon cable tie as seton in the treatment of complicated fistulas?. *J Surg Arts* 2015;8:48-50.