Journal of Population Therapeutics & Clinical Pharmacology

RESEARCH ARTICLE
DOI: 10.53555/jptcp.v30i17.2740

# SHOULD LOW ANAL FISTULA BE TREATED WITH FISTULOTOMY OR FISTULECTOMY?

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## ABSTRACT

**Background:** There is a chronic abnormal communication between the anal canal, rectum, and perianal skin, lined by granulation tissue which is known as an anal fistula. The occurrence of anal fistula and abscess formation is rare, like 1-2 over 10,000. This disease mostly affects adults who are aged between 20 to 45 years. According to their association with the anal sphincter, anal fistulae are categorized into a number of categories such as complex, simple, Trans sphincteric, extra sphincteric, supra sphincteric, intersphincteric, high or low.

**Objective:** This study's objective was to contrast the postoperative results of fistulotomy and fistulectomy in patients with low fistula-in-ano.

**Study design:** A comparative study

**Place and Duration** This study was conducted in Peoples University of medical and Health sciences for women Nawabshah from April 2022 to April 2023

**Methodology:** All of the participants were diagnosed with low fistula-in-ano and were admitted to the outpatient department. The sample size was equally divided into 2 groups, consisting of 25 patients in each group. People in group A were treated with fistulectomy and people in group B were treated with fistulotomy. Low Trans sphincteric, subcutaneous, and low intersphincteric are the types that are included in low fistula-in-ano. Every patient's clinical history was obtained. A proper clinical examination was conducted on the participants which included a digital rectal examination (DRE). It was conducted to examine the tone of the anal sphincter.

**Results:** There were a total of 50 people enrolled in this research. They all were divided into 2 groups. Most participants were men, representing 88% of the total sample size. There were a total of

44 men and only 6 women, showing a ratio of 7.3:1. The average age of the participants was 37.5 years. A total of 82% of the participants were having subcutaneous anal fistula. Fistulotomy took less time to operate as well as wound healing.
**Conclusion:** fistulotomy for low-type anal fistula resulted in superior postoperative results, including greater pain reduction, earlier hospital discharge, and faster wound healing.

**Keywords:** fistulotomy, anal fistula, fistulectomy, adults.

## INTRODUCTION

An anal fistula is a persistent aberrant connection between the rectum, perianal skin, and the anal canal that is coated with granulation tissue. [1]. The occurrence of anal fistula and abscess formation is rare, like 1-2 over 10,000 [2]. It is developed mostly in men than women. The male- to-female ratio of its incidence is 2:1 [3]. This disease mostly affects adults who are aged between 20 to 45 years. According to their association with the anal sphincter, anal fistulae are categorized into a number of categories such as complex, simple, Trans sphincteric, extra sphincteric, supra sphincteric, intersphincteric, high or low [4, 5]. The majority of anal fistulas are caused by a perianal abscess that either does not drain correctly or bursts on its own [6]. Inflammatory bowel disease, cancer, and certain infections such as tuberculosis are other risk factors. Furthermore, anal fistulas can form after an internal sphincterotomy for an anal fissure [7].
Rather than high-variety anal fistulae, low-variety is more common. When an anal fistula is being treated surgically, the main aim is to completely destroy the fistula without letting the anal continence compromise [8]. It is really important to have prior knowledge related to the anatomy of the anal sphincter and etiology in order to treat anal fistulae.

Fistulectomy or fistulotomy are the two main treatment options for low fistula-in-ano [9]. However, unlike fistulotomy, which has a lower incidence of such complications, fistulectomy is associated with consequences such as partial or full fecal incontinence. As a result of the lower risk of complications, fistulotomy is often favoured over fistulectomy [10]. High-risk kinds of fistula-in-ano, on the other hand, necessitate a number of surgical treatments. The Seton method is one of these surgical options that produce great functional results without involving the anal sphincter being severed [11].
Nonetheless, there is an ongoing discussion about the best surgical treatment for low fistula-in-ano, taking into account aspects such as healing duration, postoperative pain frequency, recurrence rates, and fecal incontinence. In cases of low fistula-in-ano, the goal of this study was to compare and contrast the postoperative results of fistulectomy and fistulotomy.

## METHODOLOGY

The Ethical review committee approved this research. In order to determine the sample size, the WHO calculator was used. A total of 50 people were selected to be a part of this research. All of the participants were diagnosed with low fistula-in-ano. All of the patients were admitted to the outpatient department. The lottery method was used to divide these patients randomly into 2 groups; Group A and Group B. The sample size was equally divided into 2 groups, consisting of 25 patients in each group. People in group A were treated with fistulectomy and people in group B were treated with fistulotomy. Low Trans sphincteric, subcutaneous, and low intersphincteric are the types that are included in low fistula-in-ano.
**Exclusion criteria:** People who were having complex, high, or recurrent fistula were not a part of this study. Moreover, those who were linked with fecal incontinence were also not included. Furthermore, those people who were diagnosed with ischemic heart disease, diabetes mellitus, taking steroid therapy, or malignancy were also not a part of this research.
Every patient's clinical history was obtained. A proper clinical examination was conducted on the participants which included a digital rectal examination (DRE). It was conducted to examine the tone of the anal sphincter. Before admitting the patients, the diagnosis was confirmed through a

fistulogram. ECG, full blood count, HCV, HBsAg, urea, X-ray chest, and sugar-related investigations were performed.

Every patient's consent was obtained. The procedures were conducted under general anesthesia in the lithotomy position. Preoperative proctoscopy was performed prior to the normal procedure to check the internal opening and identify any additional related pathology. When the internal aperture could not be found, hydrogen peroxide was sprayed via the external opening to aid discovery. During the normal process, hemostasis was ensured, and patients were allowed to ingest oral intake once they had fully recovered from anesthesia. They were then discharged the next day with instructions on personal cleanliness and sitz baths.

Patients were given oral antibiotics, analgesics, and stool softeners to help them heal. They were subsequently followed up on a weekly basis at the outpatient department for 12 weeks, and all patients completed their scheduled follow-up sessions. The postoperative results were entered on a preset form, and the data were analyzed with SPSS Version 16.

Descriptive statistics were employed to present the frequency of qualitative variables, and the Chi-square test was utilised to compare categorical data. A p-value less than 0.05 was deemed statistically significant with a 95% confidence interval.

## RESULTS

There were a total of 50 people enrolled in this research. They all were divided into 2 groups. Most participants were men, representing 88% of the total sample size. There were a total of 44 men and only 6 women, showing a ratio of 7.3:1. All of the patients were aged from 23 to 65 years. The average age of the participants was 37.5 years. Overall 94% of the participants (n=47) had complaints such as serosanguinous or serous discharge. 26% of the participants (n=13) had pain and 42% of the participants (n=21) had pruritus. Table number 1 shows the type of anal fistula found in the patients. Table number 2 shows details regarding complications while Table number 3 shows the comparison of both of the procedures.

**Table No. 1: type of anal fistula found in the patients**

| **Type** | **N** | **%** |
|---|---|---|
| **Subcutaneous** | 41 | 82 |
| **Intersphincteric** | 6 | 12 |
| **Transsphincteric** | 3 | 6 |

**Table No. 2: details regarding complications**

| **Complications** | **Group A (Fistulectomy)** | **Group B (Fistulotomy)** |
|---|---|---|
| **Bleeding (After surgery)** | 2 | 1 |
| **Pain (After surgery)** | 18 | 10 |
| **Recurrence** | 2 | 1 |
| **Discharge (After surgery)** | 13 | 9 |
| **Wound infection** | 2 | 2 |
| **Complete incontinence** | 0 | 0 |
| **Partial incontinence** | 4 | 2 |

**Table No. 3: comparison of both of the procedures**

| Variables | Group A (Fistulectomy) | Group B (Fistulotomy) |
|---|---|---|
| **Wound healing (weeks)** | 6 to 8 | 4 to 6 |
| **Duration of surgery (min)** | 30 to 40 | 15 to 25 |
| **Stay in hospital (days)** | 1 to 2 | 1 to 2 |

## DISCUSSION

Fistula-in-ano is a non-cancerous disorder, although it can have a significant influence on a person's quality of life. The low variety accounts for approximately 90% of all fistulae [12]. While there has been great advancement in the surgical care of fistula-in-ano, there are still substantial postoperative issues, including morbidity and recurrence. Fistulectomy and fistulotomy are the most often used surgical methods for addressing this problem. As both procedures are connected with a multitude of difficulties, each has pros and disadvantages. The average age of the patients in this study was 37.5 years, and males were more in number. This finding is consistent with previous research studies, which have shown a wide range of age and gender distribution [13, 14].

Anal fistula patients experience a variety of symptoms. The most often reported presenting ailment in this study was serous or serosanguinous discharge, which affected 94% of the participants. In another study, Ahmed et al. discovered that the most common symptoms were swelling (86.6%), discharge (37%), and itching (27%) [15]. Meanwhile, Kamal ZB discovered discharge from the exterior orifice in 39.47% of the instances [16].

In this study, postoperative pain was reported as the most prevalent complaint by 72 percent of patients in group A and 40 percent of patients in group B, and this difference was shown to be statistically significant. Ahmed et al. also discovered substantial variations in postoperative pain between the two groups by the end of the first week [15]. Patients in Group B, on the other hand, received significant pain reduction after four weeks. Similarly, Esebai et al. found a significant reduction in pain intensity in the fistulotomy group [17]. Other researchers, on the other hand, found no significant difference between the two groups in terms of postoperative discomfort [18].

For patients, postoperative wound discharge is a troublesome consequence. In this investigation, there was no discernible difference between the two groups, which is consistent with the results of another study. Postoperative hemorrhage was also not shown to be considerable, which is consistent with previous research. Wound infection, on the other hand, was the most common consequence in the current study, and it was frequently ascribed to poor cleanliness practices, which resulted in delayed wound healing. Despite its prevalence, wound infection was not statistically significant. This issue was treated with oral antibiotics and local antiseptic dressings. In a research conducted by Kamal et al., infection rates for fistulectomy and fistulotomy groups were 3.12% and 2.27%, respectively, and were not statistically significant [16].

In this study, 16 percent of patients in group A and 8 percent of patients in group B had partial incontinence to gasses. This condition, however, entirely recovered when the incision healed and with the help of physiotherapy. Fortunately, no incidences of complete fecal incontinence were found in this research. Cheung et al.'s analysis revealed no discernible difference between the two groups in terms of incontinence. [19]. Fistula-in-ano is well-known for its tendency to recur, especially in cases of high variety. Recurrence typically occurs around 4 to 6 weeks after the surgical procedure.

In our study, two patients had recurrences after fistulectomy, and one patient had a recurrence after fistulotomy. Similar recurrent patterns have been seen in other investigations. The operating time for fistulectomy was statistically considerably longer than that for fistulotomy. This distinction stems from the nature of the surgical techniques, with fistulotomy simply opening up the tract. Similar

results have been observed in other investigations [20]. Regarding hospital stay, both procedures required nearly the same duration of stay since admission was not necessary after surgery, allowing patients to be discharged and followed up in the outpatient department.
Our research has certain limitations. Firstly, the sample size was very small. Secondly, the follow-up time was also very short. As a result of the data's single-center origin, multicenter studies with sizable sample sizes and thorough follow-up are advised to enhance evidence-based practices and produce future guidelines.

## CONCLUSION

In comparison to fistulectomy, fistulotomy for low-type anal fistula resulted in superior postoperative results, including greater pain reduction, earlier hospital discharge, and faster wound healing.

**Source of funding:**
There was no specific source of funding for the present study.

**Interest confliction:**
There was no conflict of interest in the present study

**Permission:**
Permission was acquired and received from the ethical committee before the conduct of the study

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