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Postoperative Outcomes of Fistulotomy in Low Perianal Fistula: Emphasis on Healing Time

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Abstract

Background: *Perianal fistula is a common anorectal condition that significantly impacts the quality of life. Fistulotomy remains the standard treatment for low perianal fistulas because of its simplicity and high success rate. This study aimed to evaluate postoperative outcomes, focusing on wound healing time, in patients who underwent fistulotomy at a tertiary care center in Bangladesh.*

Methods: *This cross-sectional study was conducted at the Department of Surgery, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh, from April to September 2012. Fifty patients who met the inclusion criteria underwent standardized fistulotomy were included in this study. Demographic data, presenting complaints, postoperative outcomes, and healing duration were recorded. Data were analyzed using SPSS version 21.0..*

Result: *The majority of patients (36%) were aged 31–40 years, with a male predominance. Discharge (96%) and pain (80%) were the most common complaints. The mean postoperative pain score was 5.2. Most patients were discharged within 3–4 days postoperatively. Wound healing occurred within 4 weeks in 48% of the cases.*

Conclusion: *Fistulotomy for low perianal fistulas yielded excellent short-term results, with rapid healing, and minimal complications. Larger studies with extended follow-up are required to confirm the durability of these outcomes.*

Keywords: *Low perianal fistula, fistulotomy, postoperative outcomes, wound healing*

1. INTRODUCTION

Perianal fistula refers to an irregular passage between the perianal skin and the anal canal, the common cause of which occurs through the cryptoglandular infection leading to the formation of abscesses and later on, chronic communication of the fistula [1]. The condition is linked with substantial morbidity because of constant leakage, agony, and repeated infection, which negatively affects the quality of life of patients [2]. It has been estimated that approximately 1-2 cases of fistula-in-ano per 10000 population per year occur worldwide, and this is more common in males of the third and fifth decades of life [3, 4].

As treatment, surgery will still be indicated because spontaneous healing occurs rarely. Fistulotomy is commonly used to treat low perianal fistula in most cases, owing to its ease of application and high cure rates [5]. It is performed by opening the fistulous tract open to heal by secondary intention, and thus clearing the supply of the collection, causing chronic infection. The success rates of fistulotomy are reported to be between 64 to 90 percent healing after surgery [6]. Nonetheless, there are still some concerns about postoperative pain, a slow healing process of wounds. A functional outcome especially that of continuity maintenance, is also a very significant factor in determining the efficacy of the procedure [7]. A number of modifications, including marsupialization, to improve the healing process and minimize postoperative pain have been investigated [8, 9].

The time of wound healing considerably influences the satisfaction of patients and

returning to normal life; hence, a crucial parameter in analyzing the attempt of surgery [10, 11].

In Bangladesh, perianal fistula represents a frequent cause for surgical referral, yet data on postoperative outcomes of fistulotomy, particularly wound healing time, remain limited. While international studies have reported favorable results [8, 10], local patient demographics, healthcare access, and follow-up practices may influence outcomes. Moreover, variations in surgical expertise and postoperative management could lead to differences in healing trajectories.

This study was designed to address these gaps by prospectively evaluating the postoperative outcomes of fistulotomy in patients with low perianal fistula at a tertiary care center in Bangladesh. By documenting these outcomes in a local cohort, the findings aim to provide evidence that can guide clinical decision-making, optimize patient counseling, and inform surgical practice in similar resource settings.

2. Methodology & Materials

This cross-sectional study was conducted at the Department of Surgery, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh, from April 2012 and September 2012. A total of 50 patients diagnosed with low perianal fistula were included in the study population.

2.1. Sample Selection

Inclusion Criteria

- Patients diagnosed with low perianal fistula confirmed by clinical examination.
- Age ≥ 11 years.
- Patients are suitable for fistulotomy as per surgical evaluation.
- Patients are willing to provide informed consent for participation.

Exclusion Criteria:

- Patients with high perianal or complex fistulas.
- Presence of Crohn's disease, tuberculosis, or malignancy.
- Previous anorectal surgery for fistula-in-ano.
- Pregnant or lactating women.

2.2. Data Collection and Study Procedure

Data were collected using a structured case record form. Baseline demographic information, clinical history, and presenting symptoms were recorded through patient interviews and examination. Surgical details and postoperative recovery parameters were documented during hospital stay. Wound healing was assessed during follow-up visits. All procedures were performed by experienced surgeons following a standardized fistulotomy protocol to ensure consistency in surgical technique and postoperative care.

2.3. Ethical Considerations

Ethical approval was obtained from the institutional review board of BSMMU. Written informed consent was obtained from all participants before enrollment. Patient confidentiality was maintained throughout the study, with data anonymized before analysis.

2.4. Statistical Analysis

Data analysis was performed using SPSS version 21.0. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to summarize findings. Comparative analyses between variables were conducted using appropriate statistical tests.

3. Results

This study evaluated postoperative outcomes following fistulotomy in patients with low perianal fistula, focusing on wound healing time. The demographic characteristics, presenting complaints, postoperative recovery parameters, and wound healing duration are summarized below

Table 1. *Age distribution of the participants (n=50)*

Age group (Years)	Number of patients	Percentage
11-20	2	4.0
21-30	12	24.0
31-40	18	36.0
41-50	14	28.0
51-60	4	8.0

Table 1 presents the age distribution of the participants. The largest proportion of patients (36.0%) were aged 31–40 years, followed by those aged 41–50 years (28.0%). Participants aged 21–30 years comprised 24.0% of the sample, while 8.0% were aged 51–60 years. Only 4.0% were in the 11–20-year age group.

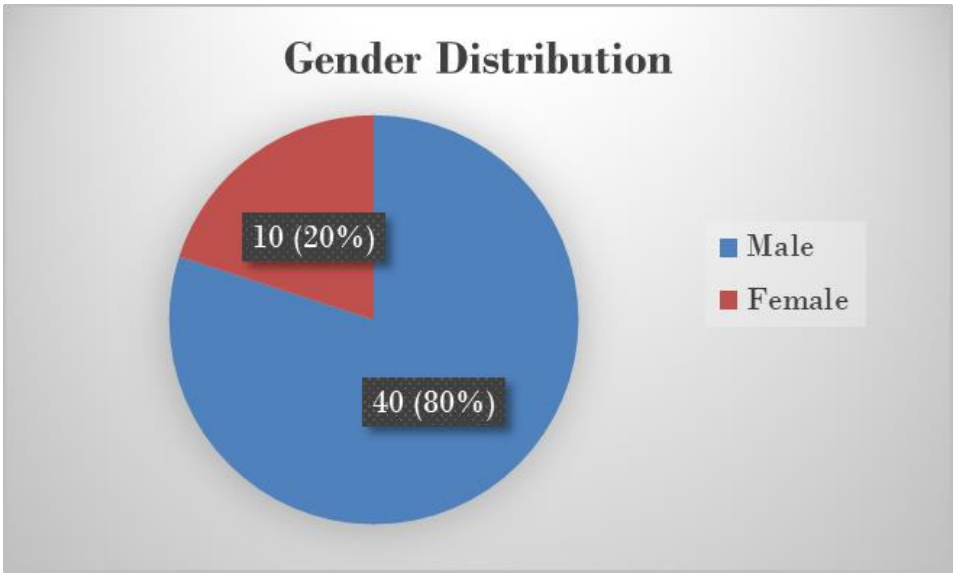

Figure 1. *Gender Distribution of the participants (n=50)*

Figure 1 illustrates the gender distribution of the study population, with the proportion of male and female participants depicted

Table 2. *Presenting Complaints*

Symptoms & signs	No of cases	Percentage
Swellings	32	64.0
Discharge	48	96.0
Pain	40	80.0
Pruritus Ani	8	16.0

Table 2 shows the presenting complaints at admission. Discharge from the fistula was the most common symptom, reported in 96.0% of cases. Pain was present in 80.0% of patients, while swelling occurred in 64.0%. Pruritus ani was the least frequent symptom, observed in 16.0% of participants.

Table 3. *Postoperative outcomes*

Postoperative outcome		Number of patients	Percentage
Postoperative pain score (Mean)		5.2	
Urine passed (hours)	12-24	16	32.0
	24-36	0	0.0
	Catheterization required	0	0.0
Hospital stays	3 days	16	32.0
	4 days	18	36.0
	5 days	12	24.0
	6 days	4	8.0
	7 days	0	0.0

Table 3 describes the postoperative outcomes. The mean postoperative pain score was 5.2. Urine passage within 12–24 hours post-surgery occurred in 32.0% of patients, with no cases recorded between 24–36 hours. Hospital stays varied, with the most common duration being 4 days (36.0%), followed by 3 days (32.0%), 5 days (24.0%), and 6 days (8.0%). No patients required catheterization or stayed for 7 days.

Table 4. *Duration of wound healing*

Period of healing	Number of patients	Percentage
3 weeks	12	24.0
4 weeks	24	48.0
5 weeks	10	20.0
6 weeks	4	8.0

Table 4 outlines the wound healing period. The majority of patients (48.0%) achieved complete wound healing within 4 weeks, followed by 24.0% within 3 weeks, 20.0% within 5 weeks, and 8.0% within 6 weeks.

4. Discussion

This prospective study evaluated postoperative outcomes of fistulotomy in patients with low perianal fistula, with a particular focus on wound healing time. The findings demonstrated that the majority of patients achieved wound healing within four weeks. These outcomes align with previous literature reporting high cure rates and favorable healing profiles for fistulotomy in simple low fistulas.

In the present study, 48 percent of patients healed after four weeks, with an additional 24 percent healed in week three, and merely 8 percent took up to six weeks. Similar results have been noted by Ganesan et al., who noted most patients healed in three to five weeks of arteriosclerosis following fistulotomy [12]. Moreover, the study conducted by Barase and Shinde found an average time to healing of 3-5 weeks in its group [13]. The convenience of the fistulous, the fastidious surgical technique and good wound healing may be the factors contributing to these outcomes.

Postoperative pain with a mean score of 5.2 in our case, is an anticipated short-term effect of fistulotomy. Similar levels of pain have been reported by Raslan, who has reported that the discomfort usually decreases significantly in the first week following surgery with proper analgesics [14]. The stay in hospital in their current series was three to six days, as described by Gupta and Vyas et al., which suggests that unproblematic low fistulotomy can be successfully treated in hospital within a week [15, 16].

Functional outcomes, particularly continence preservation, are critical in evaluating any anal fistula surgery. Although continence was not quantitatively assessed in this study, the absence of high fistulas or sphincter division beyond the superficial external sphincter likely contributed to the lack of postoperative continence issues, as supported by the work of Xu et al. [17]. Techniques such as staged fistulotomy and seton placement have been advocated for higher or complex tracts to preserve sphincter integrity [18].

The low complication rate reported here is consistent with the work of Al Sebai et al, as they argue that sphincter-sparing procedures show no benefit compared to conventional fistulotomy and indicate that in low fistulas, fistulotomy is very effective with little morbidity [19]. Also, the wound healing periods found in this study are similar to the mastication periods found using the marsupialization procedures, but other studies indicate that marsupialization can further lower the number of hours to the total healing period [8]. When compared to international data, Tozer et al. manifest the cure rates of over 90 percent in the tertiary referral centre with low fistulas [7], and Van Koperen et al. identified the risk factors of the recurrence, such as complicated tract anatomy and associated comorbidities [6]. The reason for high and complex fistula exclusion and the resulting homogenous positive outcomes is probably the copycat effect.

Ease of performing the procedures, cost-effectiveness, and the relatively high rate of success of fistulotomy, as viewed by the public health, make it an excellent choice to take place in a resource-limited context like Bangladesh. Nevertheless, proper early diagnosis, classification, and surgical treatment must be sought to obtain the best results. The addition of standardized post-surgical care plans would also add value to the healing process and alleviate complications. In summary, this study reinforces existing evidence supporting fistulotomy as an effective, safe, and reliable option for low perianal fistulas, with excellent short-term outcomes in terms of healing time. Nonetheless, longer-term follow-up is warranted to confirm the durability of these results and to identify any late complications.

5. Limitations and Recommendations

The primary limitation of this study is its small sample size and relatively short follow-up duration, which limit the generalizability of findings. Functional outcomes, such as continence preservation, were not quantitatively assessed. Future research should involve larger multicenter trials with longer follow-up periods and standardized continence scoring to validate these findings and explore the comparative efficacy of newer sphincter-preserving techniques.

6. Conclusion

Fistulotomy for low perianal fistula demonstrated excellent short-term outcomes in this study, with the majority of patients achieving wound healing within four weeks. The procedure was safe, effective, and well tolerated, with minimal complications and short hospital stays, reaffirming its role as a standard surgical option for low perianal fistulas.

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CONFLICTS OF INTEREST

There are no conflicts of interest.

ETHICAL APPROVAL

The study was approved by the Institutional Ethics Committee.

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