

# Is Fistulotomy a Better Option Than Fistulectomy For Low Anal Fistulae?

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## ABSTRACT

**Objective** To compare the postoperative results of fistulectomy and fistulotomy for low fistula in ano.

**Study design** Comparative study.

**Place & Duration of study** Surgical 'B' unit, Hayatabad Medical Complex Peshawar, from March 2020 to February 2021.

**Methodology** In this comparative study, a total of 48 patients were included. They were divided into groups A and B, each comprising of 24 patients. After thorough investigations, group A was subjected to fistulectomy and group B to fistulotomy. Patients were followed in OPD for 12 weeks. Postoperative outcomes were recorded and analyzed through SPSS version 16. The Chi-Square test was used for the comparison of categorical data. A  $p < 0.05$  was taken as statistically significant.

**Results** Age of the subjects was from 23 years to 65 years with a mean age of  $37.5 \pm 6.5$  years. Male to female ratio was 7:1. Preoperatively, 81.25% patients had subcutaneous, 12.5% intersphincteric and 6.25% transphincteric low anal fistulae. Postoperative morbidity included pain (group A - 75% and group B - 41.7%), discharge from wound (group A - 50% and group B - 37.5%), and recurrence rate of fistula 8.3% in group A and 4.2% in group B. Operative time was 30 to 40 minutes in group A and 15 to 25 minutes in group B ( $p=0.04$ ), wound healing time 6 to 8 weeks in group A and 4 to 6 weeks in group B ( $p=0.04$ ). However, the hospital stay was 1 to 2 days in both the groups which was insignificant ( $p=1.00$ ).

**Conclusion** Fistulotomy procedure was found better in terms of postoperative outcome compared to fistulectomy.

**Key words** Fistulotomy, Fistulectomy, Low fistula in ano.

## INTRODUCTION:

Anal fistula is a chronic abnormal communication lined by granulation tissue, between the rectum, anal canal and perianal skin. The incidence of abscess formation and anal fistula is 1-2/10,000. Males are commonly affected than females with male to female

ratio of 2:1.<sup>1</sup> Adults between 20-45 years, are most commonly affected by this disease. Anal fistulae are classified into high or low, simple or complex and intersphincteric, transphincteric, supra sphincteric and extra sphincteric according to their relation with anal sphincter.<sup>2,3</sup> Majority of the anal fistulae develop secondary to the perianal abscess which is either inadequately drained or rupture spontaneously.<sup>4</sup> Other causes include inflammatory bowel disease, malignancy, and specific infections like tuberculosis.<sup>5,6</sup> Anal fistula may also develop following internal sphincterotomy for anal fissure.<sup>7</sup>

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Low anal fistulae are more commonly encountered than high variety. The goal of the surgical treatment of an anal fistula is to permanently eradicate the fistula without compromising the anal continence.

Prior knowledge regarding the etiology and anatomy of anal sphincter is of utmost importance in the management of anal fistulae.<sup>8</sup> Low fistula in ano is treated either through fistulectomy or fistulotomy. Fistulectomy is associated with complications like partial or complete fecal incontinence as compared to fistulotomy. Therefore, fistulotomy is preferred over fistulectomy due to its low complications rate.<sup>9-11</sup> Number of surgical procedures are performed for high type of fistula in ano.<sup>12,13</sup> Seton procedure provides excellent functional results without cutting the anal sphincter.<sup>14</sup> There is still ongoing debate about choice of surgical procedure for low fistula in ano in relation to frequency of postoperative pain, healing time, fecal incontinence, and recurrence.<sup>15-17</sup> The objective of this study was to compare the postoperative outcome of the procedures fistulectomy and fistulotomy for low fistula in ano.

#### **METHODOLOGY:**

This was a comparative study conducted at Surgical "B" unit, Hayatabad Medical Complex Peshawar, from March 2020 to February 2021 after approval of ethical review board of the institution. Patients were divided randomly through lottery method, into Group A comprising of 24 patients, who were subjected to fistulectomy while group B comprising of the same number of patients, underwent fistulotomy. The sample size of 48 was calculated by using WHO calculator keeping proportion of 3.12%<sup>16</sup> postoperative infection following fistulectomy, with 95% confidence interval and 5 % margin of error. These 48 patients with the diagnosis of low fistula in ano, were admitted from outpatient department.

Low fistula in ano included subcutaneous, low intersphincteric and low trans sphincteric type of fistulae. Patients having high, complex and recurrent fistulae or fistula associated with fecal incontinence, were excluded. Patients suffering from inflammatory bowel diseases, tuberculosis or associated comorbid diseases like diabetes mellitus, ischemic heart disease, malignancy, or taking steroid therapy, were also excluded. A detailed history and clinical examination including digital rectal examination (DRE), were performed to assess the tone of anal sphincter. A fistulogram was performed usually before admission to confirm the diagnosis and assess the site of internal opening. Baseline investigations including full blood count, urea, sugar, HBsAg, HCV, X-ray chest and ECG were performed.

A written informed consent was taken from the patients after explaining the procedures. Procedures

were formed in lithotomy position under general anesthesia or spinal anesthesia. Preoperative proctoscopy was performed to assess the internal opening and any other associated pathology. In cases, where internal opening was not identified, hydrogen peroxide was injected through external opening to locate the internal opening. After the standard procedure hemostasis was secured. Patients were allowed orally after complete recovery from anesthesia. Patients were discharge on the following day with the advice of personal hygiene and sitz baths. Oral antibiotics, analgesics and stool softeners were also prescribed. Patients were followed on weekly basis in the outpatient department for 12 weeks. All patients completed their follow up visits. Postoperative outcome were noted on a predesigned form. Data were analyzed through SPSS Version 16. Descriptive statistics were used to present frequency of qualitative variables. Chi-square test was used for the comparison of categorical data. A p-value of less than 0.05 was considered as statistically significant with the confidence interval of 95%.

#### **RESULTS:**

A total of 48 patients were enrolled. There were 42 (87.5%) male and 6 (12.5%) female patients with ratio of 7:1. The age of the patients was from 23 years to 65 with the mean age of 37.5± 6.5 years. The presenting complaints were serous or serosanguinous discharge in 45 (93.7%) patients, pruritus in 20 (41.7%) and pain in 13 (27.1%) subjects. Twenty-five (52.08%) patients had history of surgical drainage of perianal abscess and in 9 (18.7%) perianal abscess burst spontaneously. In 39 (81.35 %) patients there was subcutaneous anal fistula, 6 (12.5%) had intersphincteric while 3 (6.25%) had trans-sphincteric low anal fistulae.

Postoperative morbidity included postoperative pain (group A - 75% and group B - 41.7%), wound discharge (group A -50% and group B - 37.5%). Details are given in table I. Operative details and hospital stay are mentioned in table II.

#### **DISCUSSION:**

Fistula in ano is a benign condition however, it has significant bearing on the quality of life of an individual. About 90% of fistulae are of low variety. Significant advancement has been made in the surgical management of fistula in ano but still there are significant postoperative issues including morbidity and recurrence. The commonly used surgical procedures include fistulectomy and fistulotomy. Both have merits and some demerits as number of complications are associated with both

<b>Table I: Postoperative Morbidity (n=48)</b>			
<b>Complications</b>	<b>Fistulectomy (Group A) n=24</b>	<b>Fistulotomy (Group B) n=24</b>	<b>P- value</b>
Postoperative Pain	18 (75%)	10 (41.7%)	0.03*
Postoperative Discharge	12 (50%)	8 (37.5%)	0.4
Postoperative Bleeding	2 (8.3%)	1 (4.2%)	0.9
Wound Infection	2 (8.3%)	2 (8.2%)	0.8
Partial Incontinence	4 (15.7%)	2 (8.43%)	
Complete Incontinence	0	0	
Recurrence	2 (8.3%)	1 (4.2%)	0.9

Significant\*

<b>Table II: Comparison of the Procedures</b>			
<b>Variables</b>	<b>Fistulectomy (Group A) n=24</b>	<b>Fistulotomy (Group B) n=24</b>	<b>P- value</b>
Operative Time (minutes)	30-40 (Mean - 35)	15-25 (Mean 25)	0.04*
Wound Healing (Weeks)	6-8 (Mean 7)	4-6 (Mean 4.5)	0.04*
Hospital Stay (Days)	1-2 (Mean 1.5)	1-2 (Mean 1.5)	1.00

Significant\*

the procedures.<sup>18</sup> In this study the mean age of the patients was 37.5± 6.5 year with male predominance. This is in conformity with reported literature where wide variation is found.<sup>18-20</sup>

Patients with anal fistula present with a variety of symptoms. In this series, the common presenting complaints were serous or serosanguinous discharge in 93.7% subjects. Ahmed et al reported swelling (86.6%), discharge (37%) and itching (27%) as predominating symptoms in their study.<sup>15</sup> Kamal ZB found discharge from external opening in 39.47% cases.<sup>16</sup>

In this study, postoperative pain was the most common complaint in 75% patients in group A and 41.7% in group B which was significant. Ahmed et al also noted significant difference between the two groups at the end of first postoperative week. However, after four weeks, there was significant relief of pain in group B patients.<sup>15</sup> Similarly, Esebai et al also noted significant decrease in the intensity of pain in fistulotomy group.<sup>17</sup> Other researchers did not find significant difference between the two groups in terms of postoperative pain.<sup>19,20</sup>

Postoperative wound discharge is a complication which is quite annoying for the patients. In this series, no significant difference was noted between the two groups as reported in another study.<sup>15</sup> Postoperative bleeding was also not significant

which is similar to other studies.<sup>4</sup> In the current study, wound infection most commonly occurred due to poor hygiene which resulted in delayed wound healing. However, the frequency of wound infection was insignificant. This complication was managed with oral antibiotic and local antiseptic dressings. Kamal et al reported 3.12% and 2.27% infection rate in fistulectomy and fistulotomy groups which was not significant.<sup>16</sup>

In this study 16.7% patients in group A and 8.3% in group B had partial incontinence to gases which recovered completely after complete wound healing and physiotherapy. There was no case of complete fecal incontinence in this series. Cheung et al reported no significant difference in incontinence between the two groups.<sup>1</sup> Fistula in ano is a notorious for its recurrence and especially in the high variety. Recurrence commonly occurs 4 - 6 weeks after surgery.<sup>16</sup> In our study, two patients had recurrence following fistulectomy and one after fistulotomy. Same observations were found in other studies.<sup>1,2,16</sup> The operative time for fistulectomy was more than that of fistulotomy and was statistically significant. It is because of the nature of the surgical procedure, as in fistulotomy track is simply laid open. Same has been the findings in other studies.<sup>5,8,16</sup> Hospital stay in both the procedures was almost same as admission is not required after surgery and patients can be discharged to be followed in outpatient department.

The number of patients in each group was small and follow up time was also short. It is also a single center based data, thus multicenter studies with large sample size and long follow up are suggested to add to evidence based practices and develop future guidelines.

### CONCLUSION:

The surgical procedure fistulotomy for low type of anal fistula had better postoperative outcome in terms of pain relief, early discharge from hospital and wound healing in comparison with fistulectomy.

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Shahidullah: Data collection.

Shehzad Akbar Khan: Manuscript drafting

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