

# Outcome among Patients undergoing open Fistulectomy and Fistulectomy with Primary Closure for Low Level Fistula in Ano

Prasad K<sup>1</sup>, Anil Kumar Patel<sup>2</sup>, Suresh BP<sup>3</sup>

**Author's Affiliation:** <sup>1</sup>Assistant Professor, <sup>3</sup>Professor and HOD, Department of General Surgery, Subbaih Institute of Medical Sciences, Shivamogga, Karnataka 577201, <sup>2</sup>Senior Resident, Department of General Surgery, Shri Shankaracharya Institute of Medical Sciences, Bhilai, Chattisgarh 490 020, India.

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## Abstract

**Background:** Fistula-in-Ano is the most common malady and an intriguing problem of the Ano-rectal region in general population. The cause for the delay in treating the patients with perianal suppurations are the shy patients themselves who come to the surgeon late. The most important determinant is that a noteworthy percent of these diseases persist or even recur when the reliable modality of surgery is not adopted or when the post-operative care is inadequate.

**Objectives:** To compare the duration of hospital stay after open fistulectomy & Fistulectomy with closure done primarily.

**Materials and Methods:** A randomized prospective study was conducted by the department of General Surgery at Tertiary Care Centre from November 2017 to October 2019. A total of 104 study subjects were included in the Study without bias on a serial basis. Only the patient with low anal fistulae with straight track were taken for this study. All the patients were examined clinically and by investigation for fitness of surgery.

**Results:** The 104 patients admitted for the study were divided into two equal and comparable groups. Patients subjected to open fistulectomy were classified under Group I and those who underwent fistulectomy with primary closure were classified as Group II. The independent 't' test results show that there is a significant difference in mean of Age in years between the groups (t value = -3.437, P < 0.001). The chi-square test shows that there is no significant difference between the groups with respect to Sex (p = 0.553).

**Conclusion:** It can be concluded that the subjects who underwent open fistulectomy required longer duration of hospital stay making it less cost effective. With increased Hospital duration the charges of the hospital and further loss of working days making it more expensive procedure.

**Keywords:** Fistulectomy, Fistula in Ano, Perianal, Anal Disease

## Introduction

Fistula-in-Ano is the most common malady and an intriguing problem of the Ano-rectal region in general population. Fistula-in-Ano is mostly a preventable disease provided the perianal-perirectal suppurations are treated timely and in a corrective manner. The anatomical location of the diseased part makes the patient refrain from early consultation. The common pathogenesis is the bursting open of an acute or inadequately treated ano-rectal abscess into the peri-anal skin.<sup>1,2</sup>

**Corresponding Author:** Anil Kumar Patel, Senior Resident, Department of General Surgery, Shri Shankaracharya Institute of Medical Sciences, Bhilai, Chattisgarh 490 020, India.

**E-mail:** anilkashyap619@gmail.com

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The cause for the delay in treating the patients with perianal suppurations are the shy patients themselves who come to the surgeon late. The most important determinant is that a noteworthy percent of these diseases persist or even recur when the right reliable modality of surgery is not adopted or when the post-operative care is inadequate. The chronicity with its annoying symptoms like soiling of the under garments, itching, repeated abscess formation, makes an otherwise healthy and active person lose their earning capacity, with lowered self-confidence. Open Fistulectomy, though considered as the standard treatment for fistula in ano, primary closure after fistulectomy has the benefit of short hospital stay for patients, early wound healing, lowers costs and is a safe procedure.<sup>3,4,5,6</sup>

### Objectives

To compare the duration of hospital, stay after open fistulectomy & Fistulectomy with closure done primarily.

### Materials and Methods

A randomized prospective study was conducted by the department of General Surgery at Tertiary Care Centre from November 2017 to October 2019. A total of 104 study subjects were included in the Study without bias on a serial basis.

### Inclusion Criteria

Patients with low level fistula in ano.

### Exclusion Criteria

Patients with high level fistula in ano, recurrent fistula in ano and anal fistula associated with inflammatory bowel disease. If the patients were found to have any complicating medical conditions like Diabetes mellitus, Hypertension, Ischemic heart disease and COPD, were treated for the condition first and re assessed for fitness for surgery.

### Method of Collection of Data

Patients were subjected to either open fistulectomy or fistulectomy with primary closure. All patients were given pre-operative antibiotic prophylaxis with Inj. Cefaperazone 1gm IV. Only regional (spinal) anesthesia was administered to both the cohorts. Open fistulectomy was done in 52 patients and fistulectomy with primary closure was done in rest of the 52 patients. Postoperatively, In Diclofenac 75 mg IM BD was given as analgesia for 48 hours to both the cohorts. Post operatively

Inj. CEFAPERAZONE 1gm IV, BD was given for 48 hours to both the cohorts.

Only the patient with low anal fistulae with straight track were taken for this study. All the patients were examined clinically and by investigation for fitness of surgery. On the previous night patient was advised only liquid diet and kept nil orally after 10 P.M. Enema was given on previous night and on the day of operation.

Post-operative On the day of operation, I.V. fluids, analgesics (diclofenac sodium) and antibiotics (Ciprofloxacin, cefotaxium) and metronidazole were given. Oral liquid given on the evening of operation. Next day low residue diet given for first 2 days, afterwards regular solid diet started. The dressing or pack removed after 24 hours of operation in lay open technique. The wound was reviewed and dressings changed. 2nd post-operative day.

### Results

The 104 patients admitted for the study were divided into two equal and comparable groups. Patients subjected to open fistulectomy were classified under Group I and those who underwent fistulectomy with primary closure were classified as Group II.

The patient's characteristics of the two groups were well matched as given in the table below

**Table 1:** Distribution of Baseline Characteristics between both the groups

	Group I	Group II
No. of patients	52	52
Range of age group	20-70	20-70
Male-Female ratio (M: F)	3:01	7:01

**Table 2** Relation between Age in years and Group

Group	N	Mean	SD	t Value	P Value
Fistulectomy with Primary Closure	52	32.596	7.005		
Open Fistulectomy	52	38.135	9.269	-3.437	<0.001*

### \*-Significant

The independent 't' test results show that there is a significant difference in mean of Age in years between the groups (t value = -3.437, P < 0.001).

**Table 3** Correlation between Sex and Group

		Group		Total
		Fistulectomy with Primary Closure	Open Fistulas	
Male	Count	31	28	59
	% within Group	59.60%	53.80%	56.70%
Sex	Count	21	24	45
	% within Group	40.40%	46.20%	43.30%
Female	Count	52	52	104
	% within Group	100.00%	100.00%	100.00%
Total	Count	52	52	104
	% within Group	100.00%	100.00%	100.00%

Chi-Square Value = 0.353 P value=0.553 Not Significant

The chi-square test shows that there is no significant difference between the groups with respect to Sex (p=0.553).

**Table 6:** Associated anal diseases in study population

Associated anal disease	No of patients	Percentage(%)
Acute fissure in ano	21	20.2
Chronic fissure in ano	4	3.8
Hemorrhoids	27	26
Nil	52	50
<b>Total</b>	<b>52/104</b>	<b>50%</b>

In the present study 50% of the patients had associated anal diseases along with fistula in ano. This was insignificant role in the outcome in both the treatment groups

The independent 't' test results shows that there is a significant difference in mean of Post Op Hospital Stay (Days) between the groups (t value=-12.758, P< 0.001).

## Discussion

104 cases of low anal fistulae, both anterior and posterior, were selected for comparative study of low fistula-in-ano which were treated by fistulectomy with primary closure and laying open technique, in each category 52 cases were studied. In this study the patients with high level fistulae with branching tracts, and multiple fistulae secondary to tuberculosis and Crohn's disease are excluded.

In vast majority of the studies the most common age group of presentation of fistula in ano was found to varied from 20 to 70 years of age .

**Table 4:** Correlation between Discharge Type and Group

		Group		Total
		Fistulectomy with Primary Closure	Open Fistulectomy	
BD	Count	12	8	20
	% within Group	23.10%	15.40%	19.20%
PD	Count	30	21	51
	% within Group	57.70%	40.40%	49.00%
SD	Count	10	23	33
	% within Group	19.20%	44.20%	31.70%
Total	Count	52	52	104
	% within Group	100.00%	100.00%	100.00%

Chi-Square Value=7.509 P value=0.023 Significant

The chi-square test shows that there is a significant difference between the groups with respect to discharge Type ( p=0.023), but 100% of the patients had history of discharge from the external opening which was also a main presenting complains in both the groups Type.

**Table 8:** Relation between Post Op Hospital Stay (Days) and Group

Group	N	Mean	SD	t Value	P Value
Fistulectomy with Primary Closure	52	8.538	2.733	-12.758	< 0.001*
Open Fistulectomy	52	14.75	2.204		

\*-Significant

In the study done by Prakash Et al<sup>7</sup> the majority of them were in the age group of 21 to 40 years, Shahbaz et al<sup>8</sup> also opined that 20 to 40 years age group as the most common age group affected, Basa M et al<sup>9</sup> it was between 21 to 50 years of age. In the present study the age group varied from 20 to 70 years of age with more cases in the middle aged group of 30-50 years which is similar and comparable to other study findings .

The Fistula In ano affects both the gender and in the present study it was found to be more common among male when compared to female in the ratio of 3:1 and 7:1 in both the group 1 and group 2 respectively . In another study done by Prakash et al<sup>7</sup> and Shahbaz et al<sup>8</sup> the ratio of male to female was 4:1 . in another study done by Ani et al<sup>10</sup> the

ratio of male to female was 8: 1.

In the present study the duration of mean hospital stay was found to be 8.53 days among the subjects who underwent Fistulectomy with primary closure and 14.750 days among those who underwent open fistulectomy and this association was also found to be statistically significant .In the study done by Prakash et al<sup>7</sup> the mean hospital stay was 11.7 days for open fistulectomy and 15 days in the study done by Singh et al.<sup>11</sup> Among the subjects who under fistulectomy with primary closure the mean duration of hospital stay was 3.1 days in the study done by Damor et al<sup>12</sup>, 3.2 days in Toccaceli et al<sup>13</sup>, 5.2 days in Satyaprakash et al<sup>14</sup> study, 5.3 days in Prakash et al<sup>7</sup> study.

### Conclusion

By the present study it can be concluded that the subjects who underwent open fistulectomy required longer duration of hospital stay making it less cost effective . with increased Hospital duration the charges of the hospital and further loss of working days making it more expensive procedure .

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