

# Surgical Experience of Fistula In Ano at CMH Chattogram

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## Abstract

*Fistula in ano is a distressing chronic benign colorectal disease. There are multiple treatment options to cure this condition. The main aim of this study is to uphold the surgical experiences of fistula in ano management in Chattogram CMH in 2018.*

*This cross sectional study was conducted from January 2018 to December 2018 in department of Surgery of Combined Military Hospital, Chattogram. Here all the simple low lying fistula patients were enrolled in the study. All patients were informed regarding the study and written consent taken. Total sample size was 50; among them 25 in Group A who underwent fistulotomy and 25 in Group B who underwent fistulectomy. A data collection sheet was used as a research tool. Data regarding sociodemographic, clinical and outcome variables were recorded, entered, edited and managed using SPSS version 23.*

**Results:** *Mean age of Group A and B patients were 39.73±7.81 (age range: 26-51) years and 41.17±5.75 (age range: 25-48) years respectively. In Group A and B 21(84%) and 23(92%) patients were male respectively whereas 4(16%) and 2(8%) were female respectively. The male to female ratio in Group A and Group B were 5.25:1 and 11.5:1 respectively. All patients (100%) in both the groups presented with discharge. Besides 56% patients in Group A and 44% patients in Group B presented with itching. Above all, pain, bleeding and constipation were other common presented problems in both the groups. Fistulotomy is far more better than fistulectomy from the aspect of operating time, hospital stay, return to normal work ( $p < 0.05$ ). On the contrary, postoperative complications, healing time and uneventful outcome showed no statistically significant differences. ( $p > 0.05$ ).*

**Conclusion:** *Male patients are more sufferers in case of simple low lying anal fistula. Moreover, fistulotomy shows the better results than fistulectomy.*

**Key-words:** *Simple low lying anal fistul, fistulotomy, fistulectomy.*

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## Introduction:

Fistula in ano is a chronic abnormal communication through a tract outward from ano rectal lumen (internal opening) to the skin of perineal region or the buttock (external opening)<sup>1</sup>. Here the communicating tract is

lined by unhealthy granulation tissue. This fistula is one of the commonest benign colorectal conditions. Its true prevalence is unknown<sup>2</sup>. It is observed, by this time, that the incidence of fistula in ano in men is 12.3 per 100,000 and in women is 5.6 per 100,000.<sup>3</sup> The male to female ratio is almost 2:1<sup>4</sup>.

This pathology may result from a predecessor anorectal abscess, known as primary fistula in ano. It also may be as a result of secondary pathology developed from trauma, tuberculosis, crohn's disease, Anorectal carcinoma, exposure to radiation and so on<sup>4</sup>.

The natural history of fistula in ano consists of a periodic cycle of "crescendo" with pain and discharge due to abscess formation, followed by periods of "dormancy" after drainage (surgical

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or spontaneous), causing patient frustration<sup>5</sup>. The prime concern of management for that reason, is adequate abscess drainage followed by tract excision, if appropriate. The whole procedure must be done, keeping in mind the integrity of anal sphincter. The secondary root concern is to minimize recurrence rate following surgical management<sup>6</sup>.

There are several procedures which are applicable for treating fistula in ano. Among them fistulotomy, fistulectomy, ligation of the intersphincteric fistula tract (LIFT), advancement flap or in fill materials as like as fibrin glue or collagen plug are note worthy.<sup>7</sup> Now it is a question which treatment modality is applicable for appropriate treatment. This decision making depends on several factors like anatomy of the tract in relation to the anal sphincter<sup>8</sup> and the presence of inflammatory bowel disease. Because these were the principal risk factors associated with fecal incontinence and recurrence respectively<sup>9</sup>.

In Combined Military Hospital (CMH) Chattogram usually fistulotomy and fistulectomy are the commonly performed procedures for low anal fistula. Basically fistulotomy is the procedure where the tract is laid open, curetted and then allowed to heal by secondary intention. On the contrary, the whole fistulous tract is excised (with diathermy) in fistulectomy. The weakness of later procedure is anal sphincter impairment resulting into anal incontinence. Although major incontinence is seldom observed, minor incontinence may be apparent in upto 24%.<sup>10</sup> For that reason, surgeon's skill shows the greatest impact in the outcome of fistula in ano surgery.

The main aim of this study is to uphold the surgical experiences of fistula in ano management in Chattogram CMH in 2018.

### **Materials and Methods:**

This cross sectional study was conducted in Department of Surgery of Combined Military Hospital of Chattogram from January 2018 to December 2018. Here initially all the patients suffering from simple low lying fistula in ano were enrolled. Thereafter, they were informed

regarding the study procedure and written consent was obtained. Total 56 patients were enrolled in the study. Among them 6 were excluded due to high anal fistula and recurrence.

A pre-structured, peer reviewed, interview and observation based data collection sheet was prepared to use as a research tool. At first all the patients were clinically evaluated by taking adequate history, proper clinical examination and relevant investigations. Here thorough rectal examination including DRE and proctoscopy were done in order to rule out any abnormality of anal canal. Patients with palpable fistula tracts were taken into account and acute fistula patients where tract were not palpable were excluded from the study. Thereafter, all the patients depending on fistulotomy and fistulectomy were grouped as Group A and B respectively. This decision was made by simple random sampling. All the patients were sent to Department of Anesthesiology for Pre-anesthetic check up (PACU).

During surgery, all the patients were initially provided spinal anesthesia and thereafter positioned in lithotomy position keeping a sand bag behind the sacral region. Initially hydrogen peroxide was injected through the external opening and foams were identified to locate the internal opening. Probing was done to confirm the tract keeping in mind to avoid creation of any false passage. In Group A patients, the tract was laid open and curetted to remove the mucosa or unhealthy granulation tissue whereas in Group B, the tract location and openings were confirmed likewise and a 5 Fr NG tube was passed in the tract. The whole tract was then excised.

After completing the main surgical procedure, hemostasis was secured and excised tract was sent for histopathology for any evidence of tuberculosis or malignancy. In the post-operative period the patients were treated with antibiotics (Cap. Cefuroxime 500mg; 1+0+1@7 days and Tab. Metronidazole 400mg; 1+1+1@5 days and oral analgesis (Tab. Ketorolac 10mg; 1+0+1 PC) as well as anti-ulcerant (Cap.

Omeprazole 20mg 1+0+1 AC). The patients were advised to sit for hip bath thrice daily and after each purgation for 7-10 days.

### Statistical analysis:

Data regarding sociodemographic, clinical, surgical and outcome variables were recorded by the questionnaire. Data were entered, edited and analyzed using software statistical package for social science, SPSS version 23 (Chicago; Illinois; USA). Data analysis was done by chi-square test (categorical variables) and student's t test (quantitative variables). Variables were expressed in frequency, percentage, mean±SD. P-value was significant at <0.05.

### Results

Table-1 shows that the mean age of Group A and B patients were 39.73±7.81 (age range: 26-51) years and 41.17±5.75 (age range: 25-48) years respectively. In Group A and B, 21(84%) and 23(92%) patients were male respectively, whereas 4(16%) and 2(8%) were female respectively. The male to female ratio in Group A and Group B were 5.25:1 and 11.5:1 respectively.

Monthly income status of the patients revealed that among 25 patients in each group 16(64%) in Group A and 19(76%) in Group B belonged to middle class whereas 9(36%) in Group A and 6(24%) in Group B belonged to rich class.

**Table-I**

*Baseline characteristics of the patients (N=50; 25 in each group)*

Baseline characteristics	Group-A (Fistulotomy)	Group-B (Fistulectomy)
Mean age±SD	29.73±7.81	41.17±5.75
Age range	26 – 51	25 – 48
Sex		
Male	21 (84%)	23 (92%)
Female	4 (16%)	2 (8%)
Male : Female	5.25:1	11.5:1
Monthly income		
Poor	0 (0%)	0 (0%)
Middle class	16 (64%)	19 (76%)
Rich	9 (36%)	6 (24%)
Smoking status		
Smoker	15 (60%)	18 (72%)
Ex-smoker	6 (24%)	5 (20%)
Non-smoker	4 (16%)	2 (8%)

Out of 25 patients in each group, 15(60%), 6(24%) and 4(16%) were smokers, ex-smokers and non-smokers respectively in Group A. On the contrary, 18(72%), 35(20%) and 2(8%) in Group B belonged to similar habits respectively.

Table-II shows that all patients (100%) in both the groups presented with discharge. Besides 56% patients in Group A and 44% patients in Group B presented with itching. Above all, pain, bleeding and constipation were other common presented problems in both the groups.

**Table-II**

*Clinical presentation (N=50; 25 in each group)*

Clinical presentations	Group-A (Fistulotomy)	Group-B (Fistulectomy)	P-value
Discharge	25 (100%)	25 (100%)	
Pain	7 (28%)	9 (36%)	
Itching	14 (56%)	11 (44%)	>0.05 <sup>NS</sup>
Bleeding	1 (4%)	0 (0%)	
Constipation	3 (12%)	6 (24%)	

\*Single patient had multiple

**Table-III**  
Outcome (N=50; 25 in each group)

Outcome	Group-A (Fistulotomy)	Group-B (Fistulectomy)	P-value
Operating time (in minutes)	14.29±3.24	26.79±3.62	<0.05 <sup>S</sup>
Hospital stay (in days)	3.69±0.67	4.81±0.35	<0.05 <sup>S</sup>
Healing time (in weeks)	4.04±0.38	4.57±0.51	>0.05 <sup>NS</sup>
Return to normal work (in weeks)	10.91±2.06	15.69±0.57	<0.05 <sup>S</sup>
<b>Complications</b>			
Postoperative bleeding	2 (8%)	4 (16%)	
Postoperative infection	0 (0%)	1 (4%)	—
Uneventful	23 (92%)	20 (80%)	>0.05 <sup>NS</sup>

Table-III shows that fistulotomy is far more better than fistulectomy from the aspect of operating time, hospital stay, return to normal work ( $p = <0.05$ ). On the contrary, postoperative complications, healing time and uneventful outcome showed no statistically significant differences. ( $p = >0.05$ )

#### **Discussion:**

Anal fistula is a chronic distressing condition, sometimes, being a challenge for the surgeon. It is an important aspect of colorectal practice.<sup>11</sup> Successful surgical management of anal fistula requires accurate preoperative assessment of the cause of the primary fistulous tract and the site of any secondary extension of abscesses<sup>12</sup>.

In this study, Group A patients underwent fistulotomy and Group B patients underwent fistulectomy. In both the groups male patients were predominant in comparison to female patients (84% vs 16% in Group A and 92% vs 8% in Group B). These reports are in line to a previous literature<sup>12</sup> but contrast to others report<sup>13</sup>.

Here the principal clinical features are discharge, pain itching, bleeding and constipation that are agreed by the report of Sun et al<sup>14</sup>. All the recurrent cases were excluded from the study. We have not observed any acute abscess coexisting with fistula in ano. The previous literature showed that 7-40% of fistula preceded by anorectal abscess<sup>15</sup>. MRI

was not performed routinely as a gold standard investigation tool in our cases. Basically, MRI is mandatory for the proper delineation of anatomy of fistulous tract<sup>14</sup>. In our aspect, the proper anatomy is intended to delineate in the operating room with the help of probing, hydrogen peroxide and methylene blue.

Do Sum Kim et al note that fistulotomy is the standard treatment for simple anal fistulae and the most widely performed procedure. According to their opinion, to choose fistulotomy or fistulectomy as treatment for fistula in ano is still controversial. Interestingly, fistulotomy is still preferable because healing times are significantly shorter whereas recurrence rates are comparable. Fistulectomy is more little demanding in case of ill-defined wall tract because more damage to the tissues is observed surrounding the fistula tracts<sup>16</sup>. In our study we have compared outcome of he study in hospital stay, healing time and the time taken for return to work. In all the parameters p-value showed statistically significant differences ( $P = <0.05$ ) that revealed fistulotomy had a better outcome in comparison to fistulectomy. The variation of healing time has yielded different parameters even in earlier studies as well. The differences of healing time might be due to older age group of the patients, co-morbidity and cigarette smoking incidence in Kronborg study patients<sup>17</sup>. Here we got the Group B patients

were older than Group A as well as more smokers also. For that reason we can claim that our study reports are in favour of the previous study<sup>17</sup>.

Yasmeen and Saira showed healing time for fistulotomy was 18-30 days and the average healing time is 24 days. On the contrary, healing time of fistulectomy is 28-42 days and mean healing time is 35 days according to their study. These results are in congruence with results of our study<sup>18</sup>.

Post operative outcome showed bleeding were 2(8%) in Group A and 4(16%) in Group B. Malik AI and Nelson showed that there was no post operative bleeding in fistulotomy patients compared with one case of bleeding in fistulectomy<sup>19</sup>. Their reports are almost supported by our findings though there was no bleeding in fistulotomy patients.

The frequency of post operative infection was only one in Group B patients whereas there was no post operative infection observed among Group A patients. This depicted that fistulectomy yielded slightly higher incidence of post operative infection that might be due to the actual surgical procedure with a wider excision along the tract and a larger wound formation obviously predisposing to the infections. Our findings are almost similar to the report of Malik and Nelson<sup>19</sup>.

### Conclusion:

Male patients are more sufferers in case of simple low lying anal fistula. Moreover, fistulotomy shows the better results than fistulectomy.

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