



A COMPARATIVE STUDY BETWEEN FISTULECTOMY AND FISTULOTOMY WITH MARSUPIALIZATION OF TRACT IN A SERIES OF CASES OF SIMPLE PERIANAL FISTULA

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ABSTRACT

Fistula in ano is a hollow tract lined with granulation tissue connecting a primary opening inside the anal canal to a secondary opening in the perianal skin. It is nearly always caused by a previous anorectal abscess following infection of anal glands but can also develop secondary to Crohn's disease, anal fissures, anorectal carcinoma, radiation therapy, tuberculosis, actinomycosis, chlamydial infections and trauma.(1) The mainstay of treatment of fistula-in-ano is eradication of sepsis with preservation of anorectal function. Conventional surgical options for a low fistula-in-ano include a fistulotomy and a fistulectomy. In fistulotomy the tract is laid open, curetted and then allowed to heal by secondary intention. Recent studies have shown that marsupialisation of the fistulotomy wounds can reduce the healing time further(5,6) A fistulectomy involves complete excision of the fistulous tract, thereby eliminating the risk of missing secondary tracts and providing complete tissue. However, this method might result in anal sphincter impairment resulting into anal incontinence. Although major incontinence is rarely seen, minor incontinence may be apparent in upto 24%.(7) This study is aim as a comparison between the two modality and their relative effectiveness in the management of simple perianal fistula.

Methodology- Prior permission and approval from the ethics committee will be obtained, and an informed written consent to participate in the study will be taken from all the patients. Demographic data of each patient will be recorded including relevant clinical examination findings and findings of conventional radiological imaging. **Results-** In our study, a total of 60 cases of simple perianal fistula were randomly divided into two surgical management groups of 30 each: Fistulotomy with marsuapilazation and Fistulectomy. Patients were asked to follow up after 1 week, 1 and 3 months, and 1 year. In the post-operative period following points were observed: operative time, hospital stay, healing time, post-operative anal incontinence and recurrence. Following observations weremade during the study:

1. Mean age of the study group was 43.75 years with no difference between the two treatment groups (p-0.44).
2. Overall male preponderance was seen in the study group with 91.7% males to 8.3% females with no difference between study groups with respect to gender distribution (p-1.0).
3. Most common presenting complaint was discharge (95%), swelling (80%) and pain (70%) in both the groups.
4. No difference was observed between study groups with respect to presenting complaints (p>0.05).
5. Mean duration of symptoms was 7.4 months with no difference between study groups with respect to duration of symptoms (p-0.71).
6. Mean duration of operation was significantly less in cases operated with fistulotomy technique as compared to fistulectomy (31.98 vs 40.32 mins; p<0.05).
7. Mean hospital stay was significantly less in cases operated with fistulotomy technique as compared to fistulectomy (1.69 vs 2.91 days; p<0.05).
8. Mean post-operative pain as measured by VAS on day 1 was significantly less in cases operated with fistulotomy technique as compared to fistulectomy (4.41 vs 5.94; p<0.05).
9. Mean time for complete healing was significantly less in cases operated with fistulotomy technique as compared to fistulectomy (5.66 vs 7.91 weeks; p<0.05).
10. Wound infection was reported in 2 (6.7%) cases each while anal incontinence was reported in 4 cases of fistulectomy as compared to none in fistulotomy group (p-0.02).
11. At 12 months follow up, recurrence was reported in 2 (3.3%) and 1 (1.7%) case operated by fistulotomy and fistulectomy group respectively. The difference in recurrence rate was statistically non-significant (p-1.0).

Conclusion- Present study concludes that Fistulotomy with marsuapilazation of tract procedure is effective and preferred sphincter saving technique for fistula-in-ano. Fistulotomy has several advantages over fistulectomy which include shorter operative time, less postoperative pain, shorter hospital stay, less incidence of incontinence and faster wound healing which is expected to translate to early resumption of normal activities. The recurrence rate was comparable between the groups.

KEYWORDS :

INTRODUCTION

Fistula in ano is a hollow tract lined with granulation tissue connecting a primary opening inside the anal canal to a secondary opening in the perianal skin. It is nearly always caused by a previous anorectal abscess following infection of anal glands but can also develop secondary to Crohn's disease, anal fissures, anorectal carcinoma, radiation therapy, tuberculosis, actinomycosis, chlamydial infections and trauma.(1)

Symptoms comprise of intermittent, at times embarrassing, perianal discharge, pain and fever if associated with abscess and pruritus ani. There may be a chronic history of spontaneous resolution and recurrence.(1)

Peri-anal abscess and fistula-in-ano disease are relatively common conditions which can be challenging to manage, because of their high recurrence rate after seemingly adequate surgery.

The search has always been on for the ideal method to surgically treat fistula-in-ano while preventing recurrence and incontinence.(2)

Anal fistulae are classified into two subtypes on the basis of their location i.e. if their internal opening lies below anorectal ring they are known as low fistula and if they open above anorectal ring they are called high fistula. The commonest symptom is watery or purulent discharge and recurrent episodes of pain.(3) Pain increases gradually until temporary relief occurs with pus discharge.(4)

The mainstay of treatment of fistula-in-ano is eradication of sepsis with preservation of anorectal function. Conventional surgical options for a low fistula-in-ano include a fistulotomy and a fistulectomy.

In fistulotomy the tract is laid open, curetted and then allowed to heal by secondary intention. Recent studies have shown that marsupialisation of the fistulotomy wounds can reduce the healing time further.(5,6)

A fistulectomy involves complete excision of the fistulous tract, thereby eliminating the risk of missing secondary tracts and providing complete tissue. However, this method might result in anal sphincter impairment resulting into anal incontinence. Although major incontinence is rarely seen, minor incontinence may be apparent in up to 24%.(7)

MATERIALS AND METHODS

The study will be non blinded randomised control study.

Study Population

Patients with clinically and radiologically proven (MRI Fistulogram) simple perianal fistula (One with an internal and external opening).

Sample Size Calculation

Consecutive type of non-probability sampling was used for the selection of the study subjects. A total of 60 cases were randomly divided into two group of 30 each using computer generated random numbers:

1. Group A- Fistulotomy with marsupialization and;
2. Group B- Fistulectomy

Inclusion Criteria

Patients with clinically and radiographically proven simple fistula in ano (The one that has an internal opening and an external opening) (low trans- sphincteric (fistula tract involving less than the lower third of the anal sphincter), inter sphincteric fistula, and subcutaneous fistula; a single internal and a single external opening).

Exclusion Criteria

1. Patient with recurrent fistula
2. Patient with associated co morbid condition- Anal Fissure, Hemorrhoids, Chronic Colitis
3. Patient who refused consent to take part in this study

Methodology

Prior permission and approval from the ethics committee was obtained, and an informed written consent to participate in the study was taken from all the patients.

Demographic data of each patient was recorded including relevant clinical examination findings, blood investigations and findings of conventional radiological imaging in the Performa attached herewith.

With due pre-anaesthetic care, patients were planned and posted for respective surgeries i.e. fistulectomy and fistulotomy with marsupialization of tract. Patients were asked to follow up after 1 week, 1 and 3 months, and 1 year. In the post-operative period following points were observed:

1. Operative time
2. Hospital stay
3. Healing time

4. Post-operative anal incontinence
5. Recurrence was measured based on the presence of perianal discharge and pain in the perianal region.

RESULTS

Consecutive type of non-probability sampling was used for the selection of the study subjects. A total of 60 cases of simple perianal fistula were randomly divided into two surgical management groups of 30 each:

Group A- Fistulotomy with marsupialization and;
Group B- Fistulectomy

Mean age of the study group was 43.75 years with no difference between the two treatment groups (p=0.44).

Overall male preponderance was seen in the study group with 91.7% males to 8.3% females with no difference between study groups with respect to gender distribution (p=1.0).

Most common presenting complaint was discharge (95%), swelling (80%) and pain (70%) in both the groups. No difference was observed between study groups with respect to presenting complaints (p>0.05).

Mean duration of symptoms was 7.4 months with no difference between study groups with respect to duration of symptoms (p=0.71).

Mean duration of operation was significantly less in cases operated with fistulotomy technique as compared to fistulectomy (31.98 vs 40.32 mins; p<0.05).

Mean hospital stay was significantly less in cases operated with fistulotomy technique as compared to fistulectomy (1.69 vs 2.91 days; p<0.05).

Mean post-operative pain as measured by VAS on day 1 was significantly less in cases operated with fistulotomy technique as compared to fistulectomy (4.41 vs 5.94; p<0.05).

Mean time for complete healing was significantly less in cases operated with fistulotomy technique as compared to fistulectomy (5.66 vs 7.91 weeks; p<0.05).

Wound infection was reported in 2 (6.7%) cases each while anal incontinence was reported in 4 cases of fistulectomy as compared to none in fistulotomy group (p=0.02).

At 12 months follow up, recurrence was reported in 2 (3.3%) and 1 (1.7%) case operated by fistulotomy and fistulectomy group respectively. The difference in recurrence rate was statistically non-significant (p=1.0).

Demographic	Group A	Group B	Total	p value
Age	43.75	43.75	43.75	0.44
Gender	91.7% Male	91.7% Male	91.7% Male	1.0
Duration	7.4 months	7.4 months	7.4 months	0.71

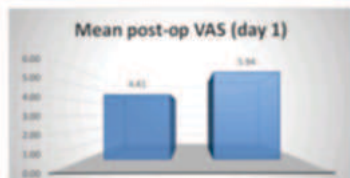
Mean duration of operation was significantly less in cases operated with fistulotomy technique as compared to fistulectomy (31.98 vs 40.32 mins; p<0.05).



Table 18. Comparison of the mean post-op pain among study group

Variables	Group	N	Mean	SD	p-value
Post-op Pain (VAS Day 1)	Fistulotomy	25	4.41	1.67	<0.05
	Fistulectomy	25	5.94	1.52	

Mean post-operative pain as measured by VAS on day 1 was significantly less in cases operated with fistulotomy technique as compared to fistulectomy (4.41 vs 5.94; $p < 0.05$).



CONCLUSION

A total of 60 cases of simple perianal fistula were randomly divided into two surgical management groups of 30 each: Fistulotomy with marsuapilazation and Fistulectomy. Patients were asked to follow up after 1 week, 1 and 3 months, and 1 year. In the post-operative period following

1. points were observed: operative time, hospital stay, healing time, post-operative anal incontinence and recurrence.

Following Observations Were Made During The Study:

1. Mean age of the study group was 43.75 years with no difference between the two treatment groups ($p < 0.44$).
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Conflict of Interest- The authors declare that they have no conflict of Interest.

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Authors Contribution- All authors have equally contributed in designing of the study, data collection, comparing the result with other publications and drafted manuscripts.

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