



COMPARISON OF FISTULECTOMY AND FISTULOTOMY WITH MARSUPIALIZATION IN THE MANAGEMENT OF SIMPLE ANAL FISTULA

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ABSTRACT

Background- Anal fistulas are considered one of the commonest causes for a persistent seropurulent discharge that irritates the skin in the neighbourhood and causes discomfort. To access and compare the clinical outcomes of fistulectomy versus fistulotomy with marsupialisation. **Methods-** The study was done at Department of General Surgery, Sardar Patel Medical College and Associated Group of Hospitals, Bikaner (Rajasthan) where patients were divided randomly into two main groups; A and B. Group A patients were subjected to fistulectomy and group B were subjected to fistulotomy with marsupialisation. **Results-** Wound healing time was significantly lower in cases of fistulotomy with marsupialisation group in comparison of fistulectomy group. Post operative recovery of patients undergoing fistulotomy with marsupialisation was quicker with added advantage of smaller post operative wound size. Duration of wound discharge was significantly lower in cases of fistulotomy with marsupialisation group in comparison of fistulectomy group. Operative time and pain was comparable in both the procedures. No patient developed post operative complication like wound infection, anal incontinence and recurrence in both groups. **Conclusion-** We concluded that fistulotomy with marsupialisation is much safer and effective than the fistulectomy for the management of simple anal fistula.

KEYWORDS : Anal fistula, Fistulectomy, Marsupialisation

INTRODUCTION

Anal fistulas are considered one of the commonest causes for a persistent seropurulent discharge that irritates the skin in the neighbourhood and causes discomfort.¹ Fistula-in-ano is one of the common ano-rectal disorder in Indian community which causes appreciable morbidity and discomfort to the patient.

Conventional surgical options for a simple anal fistula include a fistulotomy and a fistulectomy.² A fistulectomy involves complete excision of the fistulous tract, thereby eliminating the risk of missing secondary tracts and providing complete tissue for histopathological examination. A fistulotomy lays open the fistulous tract, thus leaving smaller unepithelized wounds, which hastens the wound healing. Marsupialisation of the fistulotomy wounds can reduce the healing time further.³

MATERIAL AND METHODS

The study was done at Department of General Surgery, Sardar Patel Medical College and Associated Group of Hospitals, Bikaner (Rajasthan) where patients were divided randomly into two main groups; A and B. Group A patients were subjected to fistulectomy and group B were subjected to fistulotomy with marsupialisation. All of our patients were both male and female with total number was 60; 30 for each group, their ages ranged between 18-85 years. All included patients having low anal fistulae complicating perianal abscesses. Patients with high fistulae and patients with multiple external openings were excluded.

Written consents were obtained from all patients before the study. The steps of both operative interferences were explained to all patients.

Study area – Department of General surgery (S.P. Medical College & associated group of hospitals).

Study design – Hospital based comparative study

Sample Size – Total cases to be taken 60. So for study purpose,

30 patients were taken in fistulectomy group and 30 in fistulotomy with marsupialisation group.

Sampling Technique- Simple random technique through odd and even method

Study population – Study population is to be selected as per the inclusion and exclusion criteria.

Inclusion criteria

- Those patients who will be given written and informed consent.
- Age group 18-85 years in either sex
- Patients with symptomatic simple anal fistulas.
- Low trans-sphincteric (fistula tract involving less than the lower third of the anal sphincter),
- Inter-sphincteric fistula, and
- Subcutaneous fistula
- The absence of a secondary tract.

(A simple anal fistula is defined clinically as one that had one internal opening, one external opening, a completely palpable tract, and no palpable abnormality in the upper anal canal or the lower rectum.)

Exclusion criteria

- High fistula in ano,
- Recurrent fistula,
- Patients with associated co-morbid conditions (crohn's disease, malignancy, hemorrhoids, chronic colitis)
- HIV positive and immunocompromised patients.

Statistical analysis:

- Qualitative data was expressed in the form of proportion.
- Quantitative data was expressed in mean \pm SD (complications)
- Qualitative data was compared by Chi square test
- Unpaired t test was used to inferential the difference in means.

- For significance, following at the level of “p” value taken
 - P > 0.05 = Not significant
 - P = 0.05 = Just significant
 - P < 0.05 = Significant
 - P < 0.001 = Highly significant

The local ethics committee had approved all operative procedures. Ethical approval for this study was granted by the ethical review committee.

OBSERVATIONS

In our study the age of the patient varied from 18-70 years. Majority of the patients were between 36 and 45 years of age. Both groups were comparable in terms of age distribution. Mean age in fistulectomy group was 38.53 and in fistulotomy with marsupialisation was 44.55 and the p value is 0.061 that is non-significant shows that the mean age distribution was comparable. 43 males and 17 females. Out of 30 patients who undergone fistulotomy with marsupialisation were 21 males and 9 females, in fistulectomy 22 were males and 8 were females. This shows a male preponderance in both groups.

Table 1. Wound healing time (In weeks)

	Mean (weeks)	SD	P value
Fistulectomy (N=30)	6.28	0.92	0.0001 (S)
Fistulotomy with marsupialisation (N=30)	4.31	0.64	

Postoperative wound healed earlier in fistulotomy with marsupialisation group (4.31±0.64 weeks) than in fistulectomy group (6.28±1.83 weeks). This difference in healing time reached statistical significance with a P-value of 0.0003 which shows early wound healing in fistulotomy with marsupialisation than fistulotomy group.

Table 2. Operating time (minutes)

	Mean	SD	P value
Fistulectomy (N=30)	34.26	3.64	0.576
Fistulotomy with marsupialisation (N=30)	33.12	3.28	

The operative time of two groups are comparable. It might be due to the more time taken for excision of whole tract in fistulotomy which in compensated in fistulotomy with marsupialisation group during marsupialisation.

Table 3. Post operative wound size (cm²)

	Mean	SD	P value
Fistulectomy (N=30)	1.90	0.46	0.0004
Fistulotomy with marsupialisation (N=30)	1.33	0.52	

Wound size was smaller in fistulotomy with marsupialisation group (1.33 cm² ± 0.52) than fistulectomy group (1.90cm² ± 0.46). The p value is 0.0004 which statistically significant.

Table 4. Post operative pain

Pain	Fistulectomy (N=30)		Fistulotomy with marsupialisation (N=30)		p-value
	Mean	SD	Mean	SD	
24 hours	5.18	0.84	5.31	0.78	0.234
1 weeks	2.43	0.31	2.27	0.29	0.219

Pain was assessed at 24 hrs and 1 week after surgery. No difference in pain score was noted in both the groups at 24 hour and 1 week after surgery

Table 5. Wound infection

	Fistulectomy (N=30)	Fistulotomy with marsupialisation (N=30)
Absent	30	30
Present	-	-
Total	30	30

No infection was noted in both the groups

DISCUSSION

Anal fistulas have always been considered a surgical challenge and most studies have been conducted to optimize surgical treatment by evaluating and developing new techniques. However, healing rates remained disappointing and it seemed unlikely that surgical treatment will ever lead to fistula healing in all patients. The patient satisfaction after surgical treatment depends upon factors like postoperative hospital stay, postoperative pain, return to normal activity, wound healing time and most importantly the recurrence of the disease. The principles of management are drainage of infection and eradication of fistulous tract with preservation of sphincter function. This made us change our approach.

Comparison of results of our study and other studies

	Our study		Bhupendra et al ⁴ 2012		Mohd. M et al ⁵ 2018		Barase et al ⁶ 2018	
	Gr A	Gr. B	Gr A	Gr. B	Gr A	Gr. B	Gr A	Gr. B
No. of patients	30	30	20	20	25	25	42	42
Age (years)	38.5	44.55	34.55	34.30	37.5	36.30	39.5	37.21
Sex ratio (M/F)	22/8	21/9	18/2	16/4	19/6	21/4	24/1	30/1
Operative times (Min.)	34.2	33.12	28	28.2	23.5	29.0	31.7	28.6
Post of wound size (cm ²)	1.90	1.33	2.06	1.23	-	-	-	-
Post Op pain at 24 hrs.(VAS)	5.18	5.31	4.05	4.5	3.4	3.3	3.5	5.9
Wound healing (days)	43.9	30.17	47.25	39.95	48.3	33.6	21	12
Recurrence rate	0	0	0	0	0	0	1	5
Anal incontinence	0	0	0	0	0	0	1	1

Group A – Fistulectomy and Group B – Fistulotomy with marsupialisation

CONCLUSION

Our study demonstrated that operating time, post operative pain, wound infection, recurrence and incontinence are comparable in both groups, but there is faster recovery, less duration of wound discharge, shorter wound healing time, smaller wound size and lower complications in fistulotomy with marsupialisation than fistulectomy so, it can be concluded that fistulotomy with marsupialisation is much safer and effective than the fistulectomy for the management of simple anal fistula.

However, our study sample size is not much large and follow up period is small so, a further large study and prolonged follow-up is to be needed to make a definitive guidelines on the treatment of simple anal fistula.

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