

ORIGINAL ARTICLE

Comparison of Surgical Outcomes of Fistulotomy and Fistulectomy for the Management of Simple Low Fistula-In-ANO

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ABSTRACT

Objective: This study is done to compare the fistulotomy and fistulectomy for the treatment of fistulas in ano. This study is designed for the comparison of these surgical procedures to find out their results.

Materials and methodology: this study was done at the surgery department of Sir Ganga Ram hospital Lahore during Jan 2021 to Dec 2021. 60 patients were included in this study and they were divided in two groups each of 30 participants. The group 1 patients were treated with fistulotomy while those of group 2 were selected for fistulectomy surgeries. The patients aged 20 years to 65 years were part of this study who were admitted to the department of surgery for planned fistulas operations. Before surgery Consent was taken from the patients themselves or by their close relatives.

Exclusion criteria:

1. Patients with recurrent fistulae.
2. Fistulae with secondary tracts.
3. Patients having different/ associated co-morbidities, like anal fissures, chronic colitis or hemorrhoids.
4. Patients who refused to give consent for the study.

Inclusion criteria:

1. Low Fistulae-in-ano.
2. Fistulae with single internal and external openings.
3. Absence of secondary fistulous tracts.

Results: 60 patients were included in this study. 30 of them were allocated in group 1 and were treated with fistulotomy and 30 who were the part of fistulectomy surgeries were taken group 2. Patients aging 20 to 60 years were the part of this study. Of group 1, 17 (56.6 %) were males and 13 (43.4%) were females and the mean average age was 39.9 ± 10.11 , among them, 9 (26.6%) were reported with pain and a total of 19 (53.3%) patients experienced pruritis. Of group 2, 40 ± 12.2 was the mean age reported, among them 20 (66.66%) were males and 10 (33.33%) were females. Preoperatively 7 (23.33%) had pain issues and 21 (70.0%) complained of pruritus. The comparison of fistulotomy and fistulectomy surgeries is shown in table 2. The surgery time for fistulotomy was shorter than fistulectomy with a P value of 0.04. The hospital stay for group 1 patients was 2 days while 3 days for group 2 patients with no significant results. Wound healing time was quick in group 1 than group 2. While a gross difference in wound healing was noted as for the 1st group 3 weeks while 5 weeks for the 2nd. Group 1 patients complained less post operative pain than group 2.

Conclusion: The conclusion is fistulotomy produces less post-operative pain than fistulectomy. Secondly wound healing was quick in fistulotomy than in fistulectomy.

Keywords: Fistulotomy, Fistulectomy, Fistulae in ano.

INTRODUCTION

In surgery Anal Fistulas are one of the most common benign conditions. Usually defined as chronic abnormal communication that is lined by granulation tissue to some extent, which connects the anorectal lumen to an external opening on the perineal skin ⁽¹⁾. The incidence of fistulas is about 9 per 100,000 population per year in western Europe ⁽¹⁾ and the patients most commonly affected are in third, fourth and fifth decades of their life. The most common cause of Fistula-in-ano is the anorectal abscesses that burst spontaneously or after inadequate surgery ^(2,3). Infection of the anal crypts results in anorectal abscesses which if left untreated leads to fistula formation ⁽⁴⁾. Fistulae-in-ano are also associated with some special diseases like Crohn's Disease, rectal duplication, lymphogranuloma venereum, actinomycosis, , foreign body, tuberculosis and malignancy. Fistulas are divided into low or high, simple, complex according to their location or according to their anatomy- inter-sphincteric, trans-sphincteric, and supra-sphincteric or extra-sphincteric ⁽⁵⁾. Fistulotomy is done for Fistulae below the anorectal ring in which tract is simply layed open or complete excision of the tract called Fistulectomy ⁽⁶⁾. Fistulectomy minimises the risk of secondary tracts and also provide tissue for histopathological examination for better diagnosis. In fistulotomy the fistulous tract is layed open so it leaves smaller un-epithelialized wounds, which hastens the wound healing. Thus In fistulotomy wound healing is quick⁽⁷⁾. Review of the Literature shows better surgical outcomes of fistulotomy as compared to fistulectomy ^(8,9). However different studies compare fistulotomy alone with fistulectomy keeping post-operative complications as

main outcome measure and limited reports are available on comprehensive comparison of fistulotomy and fistulectomy encompassing operative time, post-operative complications, development of anal incontinence, quality of life and patients' satisfaction.

MATERIALS AND METHODOLOGY

This study was done at the surgery department of Sir Ganga ram hospital Lahore from January 2021 to December 2021 that included 60 patients. The patients aged 20 to 65 years were the part of this study who were admitted to the surgery department. The patients treated with fistulotomy were considered group 1 while group 2 had the patients treated with fistulectomy operation. Consent was taken from the individual patients or by their close relatives.

Exclusion criteria:

1. Patients with recurrent fistulae.
2. Fistulae with secondary tracts.
3. Patients having different/ associated co-morbidities, like anal fissures, hemorrhoids, chronic colitis.
4. Patients who refused to give consent for the study.

Statistical analysis: SPSS version 23 was used for statistical analysis. Chi-square test was applied to compare the parameters and a value of <0.04 was taken significant.

RESULTS

60 patients were included in this study. fistulotomy was done on 30 patients and were taken as group 1 while 30 were the part of

fistulotomy surgery and were taken as group 2. Patients aging 20 to 60 years were included in the study. Of GROUP 1, 17 (56.6 %) were male and 13 (43.4%) were females with average age mean of 39.9 ± 10.11 for both males and females, 9 (26.6%) were reported with pain and a total of 19 (53.3%) patients had experienced pruritis.

Of group 2, 40 ± 12.2 was the mean age reported, among them 20 (66.66%) were male and 10 (33.33%) were females. Preoperatively 7 (23.33%) had pain issues and 21 (70.0%) complained of pruritus. The comparison of fistulotomy and fistulotomy surgeries is shown in table 2. fistulotomy took lesser time than fistulotomy with a P value of 0.04. The hospital stay for group 1 patients was 2 days while 3 days for group 2 patients with no significant results. Wound healing was quick in group 1 than group 2. A remarkable difference in healing of the wound was noted as for the 1st group 3 weeks while 5 weeks for the 2nd. group 1 patients experience less post operative pain than group 2, Table 2.

Table 1: preoperative attributes of patients

Parameters	Group 1 N= 30 (%)	Group 2 N= 30 (%)
Age (years) mean \pm SD	39.9 ± 10.11	40 ± 12.2
Males	17 (56.6 %)	20 (66.66%)
Females	13 (43.4%)	10 (33.33%)
Pain	9 (26.6%)	7 (23.33%)
Pruritus	19 (53.3%)	21 (70.0%)

Table 2: Comparison of fistulotomy and fistulotomy

Parameters	Fistulotomy	Fistulotomy	P-value
Stay duration in days	2 (2.1-3.5%)	3 (0.9-1.8%)	0.15
Wound healing time (weeks)	3 (1.7-3.9%)	5 (0.5-1.7%)	0.002
Mean operative time (minutes)	14 (3.5-5.9%)	17 (2.2-3.4%)	0.02
Number of patients with severe pain	8 (26.33%)	16(53.66%)	0.03
Number of patients with mild pain	22 (73.66%)	14 (47.33%)	0.04

DISCUSSION

This study is the comparison between two methods of simple fistula in ano called the fistulotomy and fistulotomy. The study showed that healing was more quick in group that was treated with fistulotomy than that which was treated with fistulotomy surgery. These findings are in parallel to those reported by Jain BK al. and Kronborg et al.^{8,6}

Operation time was much shorter in fistulotomy procedure than fistulotomy procedure. This is probably because of the fact that removing whole tract is more effortful than keeping a tract open, although this is not parallel to that found by Jain BK et al.⁸. Where operation time was approximately same may be because of the fact that they performed Marsupialization with fistulotomy that was not the part of our study and that procedure is more time consuming as is reported by Ho et al.⁷ the study showed that Recurrence and postoperative pain were comparable in both procedures. The same as is reported by Jain BK et al.⁸

In a comparative study between fistulotomy and fibrin glue of a randomized controlled trial of simple fistula in ano, there was no much change in the resting or squeeze pressure of either group as is reported in Lindsey et al.¹²

Wound healing was reported by patients on phone so it may be a sufferer of the recall bias. The better method of wound healing is by clinical examinations and that was not possible in this study, so wound healing was taken as surrogate of the duration of wound dressing kept by individual patients. Similar was the case with operative time as it was highly dependable on the operator's skills i.e a consultant or a resident surgeon, however it should not be the determining factor because both groups were treated by surgeons of different skills.

CONCLUSION

Both of these surgical procedures either fistulotomy or fistulotomy are an effective treatment for cure of fistulae in ano. Surgical procedure adopted has effect on the post operative outcomes and make the treatment better.

Eventually, after the comparison of both surgical procedures for fistula treatment we are of the opinion that fistulotomy procedure has fewer post-operative complications than fistulotomy. Secondly, wound recovery was more quick in the case of fistulotomy surgery.

REFERENCES

1. Monedeiro F, Monedeiro-Milanowski M, Ligor T, Buszewski B. A review of GC-based analysis of non-invasive biomarkers of colorectal cancer and related pathways. *Journal of clinical medicine*. 2020 Oct;9(10):3191.
2. Bhatti Y, Fatima S, Shaikh GS, Shaikh S. Fistulotomy versus fistulotomy in the treatment of low fistula in ano. *Rawal Med J*. 2011 Feb 16;36(4):284-6.
3. Williams, N.S. (2004) The anus and anal canal. In: Russell, R.C.G., Williams, N.S., Bulstrode, C.J.K., editors. *Bailey and Loves Short Practice of Surgery*. 24th ed. London: Edward Arnold 1242-71.
4. Kodner IJ. Colon, rectum, and anus. *Principles of surgery*. 1994;1191-306.
5. Parks AG, Gordon PH, Hardcastle JD. A classification of fistula-in-ano. *British Journal of Surgery*. 1976 Jan;63(1):1-2.
6. Kronborg O. To lay open or excise a fistula-in-ano: a randomized trial. *British Journal of surgery*. 1985 Dec;72(12):970-.
7. Ho YH, Tan M, Leong AF, Seow-Choen F. Marsupialization of fistulotomy wounds improves healing: a randomized controlled trial. *British journal of surgery*. 1998 Jan 1;85(1):105-7.
8. Jain BK, Vaibhaw K, Garg PK, Gupta S, Mohanty D. Comparison of a fistulotomy and a fistulotomy with marsupialization in the management of a simple anal fistula: a randomized, controlled pilot trial. *Journal of the Korean Society of Coloproctology*. 2012 Apr;28(2):78.
9. Chalya PL, Mabula JB. Fistulotomy versus fistulotomy with marsupialisation in the treatment of low fistula-in-ano: a prospective randomized controlled trial. *Tanzania Journal of Health Research*. 2013 Oct 24;15(3).
10. García-Aguilar J, Davey CS, Le CT, Lowry AC, Rothenberger DA. Patient satisfaction after surgical treatment for fistula-in-ano. *Diseases of the colon & rectum*. 2000 Sep;43(9):1206-12.