ORIGINAL RESEARCH PAPER

General Surgery

A COMPARATIVE STUDY OF FISTULOTOMY AND FISTULECTOMY IN MANAGEMENT OF SIMPLE FISTULA IN ANO : STUDY OF 50 CASES

KEY WORDS: Fistula in ano, Fistulectomy, Fistulotomy

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ABSTRACT

Background : A fistula in ano is a pathway, lined by granulation tissue that joins deeply in the anal canal or rectum and superficially on the skin around the anus. A fistulectomy involves complete excision of the fistulous tract. Low anal fistulae have been mainly treated by fistulotomy with good results. However, Marsupialization of the fistulotomy wounds can reduce the healing time further. The purpose of this study was a randomized controlled trial that aimed to compare the fistulectomy to the fistulotomy with marsupialization in the management of simple anal fistula.

Methods: Total 50 patients suffering from simple fistula in ano, admitted at tertiary care government hospital from January 2018 to December 2018 were divided into two groups. The simple fistula is defined as the fistula with one external and one internal opening alongwith a palpable tract. The 25 patients from group A had undergone fistulotomy with marsupialisation and 25 patients from group B had undergone fistulectomy procedure as a treatment modality for their low-lying anal fistula.

Results: The mean duration of surgery in fistulotomy group was 25.2min and that of fistulectomy group was 32.8 min. The median duration of wound healing was shorter in the fistulotomy group (14 days) compared to the fistulectomy group (22 days) and the difference is statistically highly significant. The incidence of incontinence in fistulotomy group observed in 1 case compared to 2 cases in fistulectomy group. Recurrence observed in one case from both the groups each within 6 months post-op period.

Conclusions: According to the present study the results of fistulotomy and fistulectomy are comparable with respect to duration of surgery, postoperative pain and recurrence rate. The postoperative wound healing is faster in fistulotomy; incidence of anal incontinence is higher in fistulectomy group compared to fistulotomy. A large size study is required to establish the standard line of treatment for fistula in ano.

INTRODUCTION

Anal fistula is a chronic abnormal communication usually lined by some degree of granulation tissue which runs outward from ano-rectal lumen (internal opening) to the external opening on the skin of the perineum or the buttock [1]. The vast majority of anal fistulae are secondary to infection of anal gland which present as perianal abscess which may spontaneously burst or inadequately drained [2]. Anal fistula may be associated with number of disease processes such as Tuberculosis, Crohn's disease, malignancy etc [3]. 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 ano-rectal ring they are called high fistula. The commonest symptom is a watery or purulent discharge and recurrent episodes of pain [4]. Pain increases gradually until temporary relief occurs with pus discharge [1]. The main principle of management of low anal fistula is to treat the condition without hampering anal continence. Low fistulas can be treated in different ways, which are fistulotomy or fistulectomy.

In fistulotomy the tract is laid open, curetted and then allowed to heal by secondary intention. In fistulectomy the whole fistulous tract is excised (with diathermy or knife) but 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% [5]. Low anal fistulae which are treated by fistulotomy show good results [4]. So, in this prospective randomized clinical study we have studied the outcomes after fistulotomy and fistulectomy in patients with simple low-lying fistula.

MATERIALS AND METHODS

Total 50 patients suffering from simple fistula in ano, admitted at tertiary care government hospital from January 2018 to December 2018 were divided into two groups. The simple fistula is defined as the fistula with one external and one internal opening alongwith a palpable tract. The 25 patients from group A had undergone fistulotomy with marsupialisation and 25 patients from group B had undergone fistulectomy procedure as a treatment modality for their low-lying anal fistula. The patients are matched according to their age, sex and other physical factors. The patients with recurrent fistula, complex fistula and fistula secondary to other diseases like tuberculosis, Crohn's disease and immunocompromised status are excluded from the study population. The intraoperative and postoperative findings like duration of surgery, healing of the wound, postoperative incontinence, pain and recurrence were noted during the intraoperative and postoperative period. The patients were asked to follow-up upto 6 months after surgery to check for recurrence and anal incontinence.

RESULTS

Total 50 patients with simple fistula were posted for surgery after randomisation. Out of the 50 patients 32 (64%) were males and 18 (36%) were females. The fistulotomy group have slight male preponderance compared to fistulectomy group. The mean age was 36.15 years in the fistulotomy group and 40.10 years in the fistulectomy group.

Table 1 : Distribution according to gender

Gender	Fistulotomy	Fistulectomy
Male	18	14
Female	7	11

Graph 1 : Distribution according to gender

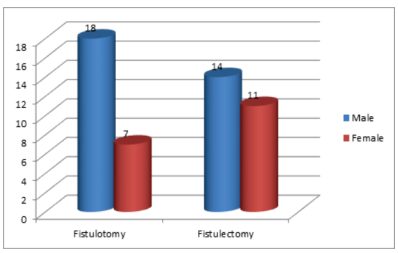

Table 2 : Mean age of patients

	Fistulotomy	Fistulectomy
Mean age of patients	36.15	40.10

The mean duration of surgery in fistulotomy group was 25.2 min with a range from 20 minutes to 42 min. The mean duration of surgery in fistulectomy group was 32.8 minutes with range 23 to 45 minutes, this difference in duration of surgery is statistically not significant. The median duration of wound healing was shorter in the fistulotomy group 14 days (Interquartile range: 10-18 days) compared to the fistulectomy group 22 days.

The postoperative pain assessed using the visual analogue scale with score of 0-10. The average pain score for both the the groups after 24 hours of surgery was 3.9 for fistulotomy group and 3.3 for fistulectomy group. This difference is also statistically not significant.

	Fistulotomy	Fistulectomy
Mean duration of surgery (minutes)	25.2	32.8
Median duration of wound healing (days)	14	22
Mean post operative pain using Visual analogue	3.9	3.3

Table 3 : Comparison of intraoperative and postoperative outcomes in fistulotomy and fistulectomy group using mean duration of surgery, median duration of wound healing and mean post operative pain**.**

The incidence of incontinence in fistulotomy group observed in 1 case compared to 2 cases in fistulectomy group. Recurrence observed in one case from both the groups each within 6 months post-op period.

	Fistulotomy	Fistulectomy
Incidence of anal incontinence	1	2
Recurrence	1	1

Table 4 : Comparison of postoperative outcomes in fistulotomy and fistulectomy group using Incidence of anal incontinence and recurrence.

DISCUSSION

Fistula in ano is one of the common clinical entity that require some kind of surgical intervention for cure. Though variety of treatment modalities are available for management of anal fistula; there is lack of consensus for the gold standard therapy.

As the different modalities have their own different merits and demerits, we decided to carry out this prospective randomised clinical study to compare the two important and very commonly used surgeries for fistula i.e. fistulotomy and fistulectomy. The important parameters to study in any procedure related with management of anal fistula are the recurrence rate and incidence of incontinence.

In the present study, the mean duration of surgery is comparable in both the groups and there is no gross statistically significant difference between both the groups. Although fistulectomy generally takes longer duration, in the present study we have included only simple fistulas; because of this reason probably the average time require for surgery is comparable in both the groups. This results are in accordance with results of Jain et al [6].

The average time required for postoperative wound healing is significantly less in fistulotomy group and the difference is statistically highly significant. The majority of other studies have similar results [6,7,8]. The reason behind earlier wound healing might related with marsupialisation of the fistulotomy tract. The postoperative pain score calculated using visual analogue score from 0-10. 0 means no pain at all while score of 10 suggests unbearable pain. The difference in pain score is not significant.

Recurrence observed in one patient from both the groups each. These recurrent fistula patients are tackled with revision surgery. The less recurrence rate is because we included patients having simple fistula only as a study population. Incidence of anal incontinence is higher in fistulectomy group compared with fistulotomy group (2 versus 1), Other studies like Kronborg et al, Murtaza et al have similar results in this regard [9,10] .

The important limitation of the present study is the limited sample size. The second important limitation is we have studied only two treatment modalities. The other treatment modalities like LIFT, VAAFT, use of fibrin glue or flaps are not at all considered in the present study. The evaluation of these newer treatment modalities is actually the need of the hour. Still it's an attempt to put front the facts we observed about fistula surgeries and to initiate a study with larger sample size with inclusion of all modalities for all types of anal fistulae.

CONCLUSION

According to the present study the results of fistulotomy and fistulectomy are comparable with respect to duration of surgery, postoperative pain and recurrence rate. The postoperative wound healing is faster in fistulotomy; incidence of anal incontinence is higher in fistulectomy group compared to fistulotomy. A large size study is required to establish the standard line of treatment for fistula in ano.

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