

Comparison of Healing Rate between Surgical and Nonsurgical Management of Acute Anal Fissure

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ABSTRACT

Aim: To compare healing rate between surgical and nonsurgical management of acute anal fissure.

Methods: This randomized controlled trial was conducted at Department of Surgery Bahawal Victoria Hospital Bahawalpur from Jan 2016 to June 2016. Total 100 patients with acute anal fissure both male and female having age range from 20-60 years were selected for this study.

Results: Total 100 patients were included in this study. Mean age of the patients was 40.75±12.75 years, mean age of the patients of Group A was 40.41±10.65 years and mean age of the patients of Group B was 40.09±11.95 years. Patients of Group A managed with Lateral internal sphincterotomy and patients of Group B managed with GTN 0.2% cream. Healing rate was 43 (86%) in patients of group A and 31(62%) patients of Group B. Difference between the healing rate of Group A and B was statistically significant (0.008).

Conclusion: Findings of present study revealed that frequency of healing in patients with acute anal fissure is better in patients managed with Lateral internal sphincterotomy as compare to patients managed the GTN cream. In male patients there is no statistical difference between healing rate of both groups but female patients found with higher healing rate in Lateral internal sphincterotomy group as compare to GTN cream group. Results of this study also reflected that there is insignificant difference different age group of both study groups.

Key words: GTN. Surgical management, Anal fissure, lateral internal sphincterotomy,

INTRODUCTION

An anal fissure is a linear ulcer of the lower half of the anal canal.¹ Acute fissures are those presenting within 3 to 6 weeks of symptom onset². Classically acute anal fissures arise from the trauma caused by the strained evacuation of a hard stool or less commonly, from the repeated passage of diarrhea.³ In men, 95% of fissures are close to the posterior midline and 5% near anterior midline, whereas in women, about 80% will be located posteriorly and 20% anteriorly⁴. The diagnosis is made by a history of pain and bleeding accompanying defecation and is confirmed by visual inspection⁵.

The underlying principle of treating anal fissure is to reduce the internal sphincter tone. This can be achieved by non-surgical and surgical methods. Commonly lateral internal sphincterotomy and GTN 0.2% cream for local application remains the popular methods of treating this condition⁶. But each method has got its own advantages and disadvantages. Lateral internal sphincterotomy is a simple surgical procedure which heals anal fissure rapidly with low recurrence rate. However disadvantages of this procedure may include; disturbance of continence, bleeding, fistula, abscess, persistent wound pain, cost and time of recovery^{7,8}.

Previous studies have been conducted on chronic anal fissure but our study is conducting on acute anal fissure. Usually the patients report inconvincibility and difficulty because of pain in proper application of GTN which leads to poor compliance of GTN application in case of acute anal fissure. So expected results of GTN in optimal period are not convenience. That's why in clinical experience and available literature, the outcome of patient with acute fissure in ano with lateral sphincterotomy is more efficient and feasible than GTN cream.

MATERIAL AND METHODS

This randomized controlled trial was conducted at Department of Surgery Bahawal Victoria Hospital Bahawalpur from Jan 2016 to June 2016. Total 100 patients with acute anal fissure both male or female having age range from 20-60 years were included in this study.

Patients with recurrent anal fissure, external or internal hemorrhoids, patients with chronic anal fissure, patients with sentinel pile, patients treated by Hakeems were excluded from the study.

Anal fissure was defined as acute one when its symptoms (moderate to severe pain during defecation, bleeding per rectum) is within 3 to 6

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weeks of onset and patients were assessed with history and physical examination.

Approval was taken from institutional review committee and written informed consent was taken from every patient.

All the selected patients were divided into two equal groups (A & B) randomly. In Group-A included those patients who were undergo Lateral internal sphincterotomy and Group-B was include those patients who were be managed with 0.2% GTN cream. Patients were followed up fortnightly for 6 weeks in the OPD or earlier in case of any complication.

Patients were evaluated by history with regards to symptoms improvements and rectal examination was performed for healing. Healing is defined when the Patient is free of symptoms (painful defecation, bleeding per rectum) and fissure is not visualized on physical examination within 6 weeks of treatment. Outcome was noted in pre-designed proforma.

The data was entered in SPSS version 16 and analyzed. Mean and SD was calculated for numerical data and frequencies were calculated for categorical data.

RESULTS

Total 100 patients were included in this study. Mean age of the patients was 40.75 ± 12.75 years, mean age of the patients of Group A was 40.41 ± 10.65 years and mean age of the patients of Group B was 40.09 ± 11.95 years.

Patients of Group A managed with Lateral internal sphincterotomy and patients of Group B managed with GTN 0.2% cream. Healing rate was 43 (86%) in patients of group A and 31(62%) patients of Group B. Difference between the healing rate of Group A and B was statistically significant (0.01). (Table 1)

Out of 32 male patients of Group A, healing was noted in 27(84.38%) patients. Out of 31 male patients of Group B, healing was seen in 21(67.74%) patients. Statistically insignificant (P=0.14) difference between healing rate in both treatment groups was noted.

Out of 18 female patients of Group A, healing was noted in 16 (88.89%) patients and out of 19 female patients of Group B, healing was noted in 11 (57.9%) patients. Statistically insignificant (0.06) difference between the healing rate among the female patients of Group A and Group B was noted (Table 2).

Age range of the patients was 20-60 years. All the patients of Group A and Group B was divided in to two age groups Age Groups, Age Group 20-40 years and Age Group 41-60 years. Comparison of healing rate between Group A and B for age group

20-40 years and age group 41-60 years was done. In Age Group 20-40 years, out of 29 patients of Group A, healing was seen in 27 (93.1%) and in Group B was 17 (65.38%). Significant (P= 0.02) difference of healing rate between both groups was noted. In Age Group 41-60 years, out of 21 patients of Group A, healing was noted in 16(76.19%) patients and in Group B was 14(58.33%). But the difference was statistically insignificant (P = 0.34) (Table 3).

Table 1: Comparison of frequency of healing between the both groups

Group	Healing		Total
	Yes	No	
A	43(86%)	7(14%)	50
B	31(62%)	19(38%)	50

P. value =0.01

Table 2: Comparison of healing between male and female patients of both groups

Group	Healing		Total
	Yes	No	
Male patients (*)			
A	27(84.38%)	5(15.62%)	32
B	21(67.74%)	10(32.26%)	31
Female patients (**)			
A	16(88.89%)	2(11.11%)	18
B	11(57.9%)	8(42.1%)	19

P. value = * (0.14), ** (0.06)

Table 3: Comparison of healing between different age groups

Group	Healing		Total
	Yes	No	
Age group 20-40 years (*)			
A	27(93.1%)	2(6.9%)	29
B	17(65.38%)	9(34.62%)	26
Age group 41-60 years (**)			
A	16(76.19%)	5(23.81%)	
B	14(58.33%)	10(41.67%)	

P value = * (0.02), ** (0.34)

DISCUSSION

The objective of this study was to compare the healing rate in patients with acute anal fissure between the two treatment modalities i.e. lateral internal sphincterotomy and GTN cream. Total 100 patients with acute anal fissure were selected and divided into two equal groups A and B. In Group A, lateral internal sphincterotomy was performed and patients of Group B was managed with GTN cream and after 6 weeks healing was assessed.

Healing rate was 86% and 62% in patients managed with lateral internal sphincterotomy and GTN cream respectively and the difference was statistically significant (P = 0.01) between the both groups. In one study by Manan et al, frequency of

healing in cases of acute anal fissure managed with Lateral internal sphincterotomy was 95% and 70% in patients managed with GTN cream.⁵ These findings are comparable with our study.

Memon MR et al⁹ found 100% healing rate in patients managed with Lateral internal sphincterotomy and 30.04% in patients managed with GTN cream.

Hashmat A et al¹⁰ made a conclusion that GTN cream is a safe and effective modality for the treatment of fissure in-ano. GTN cream is a good alternative mode of therapy for patients who refuse surgery and prefer medical line of treatment.⁵

Rather SA et al¹¹ concluded that lateral internal sphincterotomy under local anesthesia is more curative, easy and safe, in the hands of a beginner as well as an experienced surgeon, with highest patient satisfaction, and should be considered as the first line of therapy in both chronic and resistant/recurrent acute anal fissures. Libertiny et al¹² in a comparative trial reported 98% healing of anal fissure with lateral internal sphincterotomy while GTN relieved 56%, with 10% recurrence.

CONCLUSION

Findings of present study revealed that frequency of healing in patients with acute anal fissure is better in patients managed with Lateral internal sphincterotomy as compare to patients managed the GTN cream. In male patients there is no statistical difference between healing rate of both groups but female patients found with higher healing rate in Lateral internal sphincterotomy group as compare to GTN cream group. Results of this study also reflected

that there is insignificant difference different age group of both study groups.

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