

Comparative Study of Open vs Close Lateral Sphincterotomy in the Management of Chronic Anal Fissure

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ABSTRACT

Aim: To evaluate the effectiveness and long term results of sphincter healing following LLIS in the management of chronic anal fissure,

Methods: This study was carried out in Nishtar Hospital, Multan from June 2013 to December 2013. A total of 100 patients attending surgical OPD were included in the study.

Results: Out of 100 patients, 73 (73%) were male and 27 (27%) were female patients. Majority of the patients were from the age group 31-40 years. At posterior midline fissure in ano was present in 91 (91%) patients and at the anterior midline it was in 9 (9%). Pain defecation was seen in all patients, constipation in 95 (95%) patients whereas bleeding from rectum in 72 (72%) patients.

Conclusion: It is concluded that in patients with chronic anal fissure, chemical sphincterotomy with topical nifedipine ointment is a non-invasive and effective modality.

Keywords: Dentate line, Sphincterotomy, defecation.

INTRODUCTION

It is multifactorial and involves anodermal ischaemia, infection, chronic constipation and hypertonicity of the smooth muscle of the internal anal sphincter and its elevated resting pressure. Fissures have a predilection for the posterior midline (90%) but may also be located in the anterior midline or lateral². The posterior commissure of the anoderm is less perfused than other anodermal regions. Studies have demonstrated that adult patients with anal fissures have significantly elevated anal canal pressures that exceeds the intraluminal pressure of arterioles³. Surgical management of chronic anal fissures has been accepted traditionally as an effective and standard procedure which results in healing of fissures in about 90% cases⁴. Medical therapies for management of anal fissures consist of three components: relaxation of the internal sphincter, atraumatic passage of stools and pain relief. Topical anaesthetic creams, sitz baths, high fibre diet, stool softeners and laxatives are therapies which are successful in healing shallow ulcers. Topical nitroglycerine, oral and topical nifedipine, oral and topical diltiazem have been used and claimed to show good results however side effects and recurrence are limiting factors for compliance. LLIS is the most simple and reliable method for relieving patient problems⁵.

The conventional treatment of anal fissure is lateral sphincterotomy. The alternative options of tailored sphincterotomy and chemical sphincterotomy using

medication such as nifedipine have recently become available⁶. The use of glyceryltrinitrate induces rapid healing of anal fissure with a 72% healing rate in one study⁷.

Topical application of 0.5% nifedipine ointment represents a new, promising, easily handled, effective alternative to lateral internal sphincterotomy⁸. It appears to offer a significant healing rate for acute anal fissure and might prevent its evolution to chronicity⁹. Closed internal sphincterotomy can be done safely under local anaesthesia in OPD with low complication rate and less postoperative period of stay¹⁰.

The objective of the study was to evaluate the effectiveness and long term results of sphincter healing following LLIS in the management of chronic anal fissure

MATERIAL AND METHODS

This study was carried out in the Nishtar Hospital, Multan in the department of Surgery from June 2013 to December 2013. A total of 100 patients were included in the study. Patients attending surgical OPD having anal fissure were diagnosed clinically and were selected according to inclusion criteria. All patients were divided into two equal groups (group-A (patients treated surgically, and group-B (treated by topical nifedipine).

RESULTS

Out of 100 patients, 73 (73%) were male and remaining 27 (27%) were female patients. Majority of the patients was falling in age group 31-40 years as

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shown in table-1. Fissure in ano was present at posterior midline in 90(90%) whereas at the anterior midline it was in 10(10%) patients (Table 2).

Pain on defecation was found in all patients. Constipation was observed in 95 (95%) patients and bleeding per rectum in 72(72%) patients (Table-3).

Table-1: Age distribution (n=100)

Age(years)	n	%age
Upto 30	33	33.0
31-40	54	54.0
41-50	07	07.0
51-60	04	04.0
> 60	02	02.0

Table 2: Distribution of patients according to location (n=100)

Location	n	%age
Posterior midline	91	91.0
Anterior midline	09	09.0

Table-3: Complications (n=100)

Complication	n	%age
Pain on defecation	100	100.0
Constipation	95	95.0
Bleeding per rectum	72	72.0

DISCUSSION

Patients were discussed with them regarding surgical and medical option and thus being placed into group-A or B and they were observed in both groups for the efficacy of each type. Previously patient experienced transient headache while using topical nitrates preparations^{10,11,12}. In one study, all patients experienced headache and 50% of them used analgesics for symptomatic relief. Headache was also reported as a complication of spinal anesthesia in surgical treatment. There are no such complaints with nifedipine application.

In a study the excellent results as 100% healing and 0% recurrence with lateral internal sphincterotomy. In this study, comparable results in the local setup were achieved and a low incidence of side effects and lack of complications were observed¹³. Topical modality has a higher recurrence/persistent rate as compared to surgical modality but no severe side effects or permanent sphincter damage results from topical nifedipine application. Patients who tend to avoid or are unfit for surgery, the topical modality is the treatment of choice but lateral internal sphincterotomy remains the gold standard treatment for fissure in ano. The results of present study are comparable with the above mentioned study.

Some other studies have shown healing rate upto 70% by GTN ointment^{14,15,16}. This study

confirms the results of other similar studies. A healing rate of 64.5%, recurrence rate of 35.7% and persistence of fissure in 33.3% was noted with topical treatment while lateral internal sphincterotomy relieved 100% of cases.

Surgery for anal fissure is associated with few complications, most of which can be prevented by the use of judicious surgical techniques and of course by familiarity with anorectal anatomy. In this study, permanent incontinence of faeces in 7.1% (P<0.045) and transient incontinence of flatus in 64.3% (P<0.000), which resolved by the end of two months was observed. However, the incidence of complications was relatively higher in other studies. Flatus control problems occurred in 35% and soiling in 22%. Abcarian found a flatus incontinence rate in 30% of patients after lateral sphincterotomy and in 40% of patients after the posterior procedure¹⁷. In a retrospective study in which patients underwent closed or open lateral sphincterotomy, 21 cases of flatus or liquid incontinence and 18 cases of recurrence of anal fissure as a later complication were observed¹⁸. In another study, 20% incidence of major complications and 8% incidence of incontinence was reported^{19,20}.

Hsu and Mac Keigan reported no postoperative soiling²¹. Only about 5% cases in our study had persistent symptoms and fissure failed to heal. Two patients were re operated and were free of symptoms after second procedure. Hananelet all reported 98% success rate with a recurrence rate of 1.4%²². Littlejohn et al reported 99% healing rates with incontinence rate of 1.4% and recurrence rate of 1.4%²³. Nyam et al showed a success rate of 95% but with recurrence rate of 8% and incontinence in 15%²⁴.

CONCLUSION

It is concluded that Lateral Internal Sphincterotomy is a safe and excellent procedure with high patient satisfaction rate and this procedure can safely be performed as a day care procedure.

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