

# A Comparative Study of Open vs Close Lateral Sphincterotomy

MUHAMMAD MUNIR AKHTAR<sup>1</sup>, AMJAD ALI<sup>2</sup>, MAHBUB AHMAD KHAN<sup>3</sup>

<sup>1</sup>General Surgeon, King Khalid Hospital Najran, KSA

<sup>2</sup>Assistant Professor Anatomy CIMS, CMH Medical College Multan.

<sup>3</sup>Consultant Orthopedic Surgeon, Prince Sultan Military Medical City, Riyadh (PSMMC), KSA

Correspondence to Dr. Amjad Ali Email: mohdmpk@yahoo.com

## ABSTRACT

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

**Methodology:** This study was carried out in Umar Hospital, Multan from May 2016 to October 2016. A total of 100 patients attending surgical OPD were included in the study.

**Results:** Among 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

Anal fissure is a longitudinal ulcer in anal canal. In 70% cases, it is present in midline posteriorly and in 30% it is midline anteriorly<sup>1</sup>. It is a benign painful condition of the andoderm characterized by raised resting anal sphincter pressure, which is important in the pathogenesis of anal fissure, possibly by impairing tissue perfusion and leading to ischaemic ulcer<sup>2,3,4</sup>.

Clinically, the fissure is visualized by gently parting the buttocks and averting the anal verge. Digital rectal examination is painful. Surgery is performed only when conservative measure fail<sup>5,6</sup> that include application of topical 0.2% glycerol trinitrate<sup>7</sup> and 2% diltiazem ointment<sup>8</sup>. The use of glyceryl trinitrate induces rapid healing of anal fissure with a 72% healing rate in one study<sup>9</sup>. Most common gold standard procedure is lateral internal sphincterotomy which may be performed by open or closed method. Patients were more satisfied with day care surgery.

Closed internal sphincterotomy can be made safely under local anaesthesia in OPD with small complication rate and less postoperative period of stay<sup>10</sup>. Lateral internal sphincterotomy leads in most cases to quick healing of chronic anal fissure and 96% of fissures heal at 6 weeks postoperatively.

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

## METHODOLOGY

This study was carried out in the Umar Hospital, Multan from May 2016 to October 2016. A whole 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 separated into two equal groups (group-A (patients treated surgically, and group-B (treated by topical nifedipine).

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## RESULTS

Out of 100 patients, 73(73%) were male and remaining 27(27%) were female patients. Most of the patients was falling in age group 31-40 years as shown in table-1. Fissure in ano was present at posterior midline in 90(91%) 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<sup>10,11,12</sup>. 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 observed<sup>13</sup>. 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<sup>14,15,16</sup>. 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 procedure<sup>17</sup>. 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 observed<sup>18</sup>. In another study, 20% incidence of major complications and 8% incidence of incontinence was reported<sup>19,20</sup>.

Hsu and Mac Keigan reported no post operative soiling<sup>21</sup>. 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. Hananel et al reported 98% success rate with a recurrence rate of 1.4%<sup>22</sup>. Littlejohn et al reported 99% healing rates with incontinence rate of 1.4% and recurrence rate of 1.4%<sup>23</sup>. Nyam et al showed a success rate of 95% but with recurrence rate of 8% and incontinence in 15%<sup>24</sup>.

## CONCLUSION

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

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