

Outcomes of lateral internal sphincterotomy for management of chronic anal fissures in a tertiary care hospital of Peshawar

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ABSTRACT

Introduction: Anal Fissure, a painful longitudinal mucosal ulcer of the anal canal is a common problem seen particularly in young and otherwise healthy adults. Lateral internal sphincterotomy remains the first line of treatment usually performed under general anaesthesia.

Objectives: To evaluate the outcomes and complications of lateral internal sphincterotomy for treatment of chronic anal fissure in Rehman Medical Institute (RMI), Peshawar.

Materials & Methods: A retrospective study was conducted at general surgery unit, RMI, Peshawar upon approval from the department of Medical Research; Data was retrieved from the RMI Data base. All patients were selected from with Chronic anal fissures who underwent lateral internal sphincterotomy from January 2016 till December 2018. The data was entered into SPSS version 22.0 for descriptive analysis. The data of these patients was evaluated for outcomes in terms of healing, recovery of pain, complications and recurrence, data was analysed for descriptive statistics in terms of frequencies using SPSS version 22.0

Results: Out of 142 patients, 106(74.6%) were males and 36(25.4%) were females, with mean age of 42.5 ± 14.06 years, 127(89.4%) presented with pain, 64(45.1%) presented with bleeding per rectum, 53(37.3%) presented with constipation, 45(31.7%) presented with a complaint of hard stools, 36(25.4%) had sentinel pile, however, 76(53.5%) were having an increased anal tone. After longer term follow up 116(81.7%) patients had no complaints regarding pain, Bleeding per rectum 61(43%), Constipation 53(37.3%) hard stools 43(30.28%), Increased anal tone 73(51.4%), and 29(20.4%) had no sentinel pile postoperatively. Excluding 21(14.78%) who had fecal incontinence none of the patient reported other complications like Recurrence, Sepsis or Re-bleed.

Conclusion: Lateral internal sphincterotomy is a safe, effective, and inexpensive procedure that leads to quick symptomatic improvement and healing in chronic anal fissure with minimal complications.

Keywords: Fissure in Ano; anal Canal; Anal Sphincter; Lateral Internal Sphincterotomy.

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INTRODUCTION

An Anal Fissure is a painful longitudinal mucosal ulcer of the anal canal which may extend from the anal verge to the dentate line.¹ It is a common problem that causes substantial morbidity in people who are otherwise healthy, and is seen particularly in young healthy adults.² Life-time risk for developing anal fissure is estimated at 7.8%, with equal incidence across the genders.³ Anal stretching beyond its capability is a known cause of this tear and commonly occurs in women after childbirth, after difficult bowel movement, anal sex, and in infants following constipation.⁴ About 90% of anal fissures occur in the posterior anal canal, due to reduced blood supply to the posterior midline anoderm; the sphincter tone in these patients is comparatively high so the blood supply is further compromised.⁵

When medical measures fail, and the fissure is chronic with fibrosis, skin tags or mucus polyps, surgical measures are conducted.⁶ Among all these modalities, Lateral Internal Sphincterotomy (LIS) remains the first line of treatment;^{7,8} it is the surgical treatment of choice for refractory anal fissures and may be offered without pharmacologic treatment failure, according to the practice parameters by the European guidelines.⁹

It is usually performed under general anaesthesia but can be carried out under local anaesthesia in the Outpatients Department.^{10,11} In LIS, the lower third of sphincter is cut through incision or stab at anal verge usually at 3 or 9 o'clock position. It has lower recurrence rate but bleeding and sepsis are common complications.¹² Despite few reports about incontinence in long term studies, the patients should be warned about it.¹³ Healing rates with open LIS range from 93% to 95% and closed approaches range from 90% to 97%. There appears to be no difference in major incontinence rates which range from 2% to 5%.^{11,14} On behalf of Clinical Practice Guidelines of the Committee of the American Society of Colon and Rectal Surgeons (ASCRS), LIS for chronic anal fissure sphincterotomy is associated with consistently superior healing rates (88% to 100%) and with fecal incontinence rates ranging from 8% to 30%, based

on follow-up intervals of up to 6 years; thus, it may be offered in select patients without first confirming failure of pharmacological treatment.¹⁵⁻²⁰

According to a research study done in general surgery unit in Mercy Teaching Hospital, Peshawar, Khyber Pakhtunkhwa (KP), Pakistan regarding the outcome of lateral sphincterotomy in chronic anal fissures patients in which 120 patient underwent LIS for anal fissures, symptoms were relieved in 110(95.8%) patient with complete healing after 16 weeks.⁵ In another study done in Saidu Teaching Hospital, Swat, KP, regarding outcomes of LIS in chronic anal fissures patient, out of 139 patients, 127 patients were followed-up; common presenting symptoms were pain in 112(81%), bleeding 76(55%) and pruritis in 7(5%) patients. Pain was relieved within 24 hours in 136(98%). All of the 127 patients had complete healing of fissure by 6 weeks.⁶

Though LIS is the procedure of choice for chronic anal fissure because it relieves symptoms and heals the fissure in nearly all patients, there is evidence that infection, bleeding, faecal incontinence and recurrence of anal fissures complicate lateral internal sphincterotomy. This study was done to evaluate the outcomes and complications of lateral internal sphincterotomy in chronic anal fissures patient in RMI, Peshawar.

MATERIALS & METHODS

In this cross-sectional descriptive study based on retrospective data from hospital records, 142 patients of 15-65 years age and both genders who had anal fissures and underwent LIS in General Surgery Unit, RMI, Peshawar from January 2016 till December 2018 were included.

Patients with anal pain due to acute anal fissure, haemorrhoids, anorectal infections, anal carcinoma, tuberculous ulcer, immunocompromised status, and proctalgia fugax were excluded from the study.

A structured Performa was designed based on objectives, with added specific questions taking help from previous literature and studies available on the topic. The questionnaire included sociodemographic data, presenting features, features after 7th post-operative day, the recovery status, and any complications. Relevant data in the patients' record files were entered into SPSS 22.0; SPSS version 22.0 and Microsoft Excel were used for organizing and analysing data for descriptive statistics.

Ethical approval was sought from the Department of Medical Research, Rehman Medical College, Peshawar; the patients' data were dealt with a high level of confidentiality and anonymity.

RESULTS

Out of a total of 142 patients, 106(74.6%) were males and 36(25.4%) were females; the mean age of was 42.5 ± 14.06 years. Most of the individuals were from Peshawar and Afghanistan.

Table 1 shows the presenting features in the patients of anal fissures.

Out of 142 patients, 127(89.4%) presented with pain, 64(45.1%) presented with bleeding per rectum, 53(37.3%) presented with constipation, 45(31.7%) presented with a complaint of hard

stools, and 36(25.4%) had sentinel pile; however, 76(53.5%) were having an increased anal tone.

Table 1: Presenting features in Anal Fissure patients (n=142).

Presenting Features	Number of Patients (f)	Percentage (%)
Pain	127	89.4
Bleeding per Rectum	64	45.1
Constipation	53	37.3
Hard stools	45	31.7
Increased Anal Tone	76	53.5
Sentinel pile	36	25.4

Table 2 shows the features that were present in the patients till the 7th post-operative day. 27(19.0%) patients complained of pain, 18(12.7%) complained of bleeding per rectum and only 3(2.1%) patients still had constipation. Increased anal tone was present in 9(6.3%) patients and 22(15.5%) patients had a sentinel pile.

Table 2: Postoperative day 7 features (n=142).

Postoperative Day 7 Features	Number of Patients (f)	Percentage (%)
Pain	27	19.0
Bleeding per Rectum	18	12.7
Constipation	3	2.1
Hard stools	0	0.0
Increased Anal Tone	9	6.3
Sentinel pile	22	15.5

Table 3 shows the presenting features that were relieved after the surgery. A total of 116(81.7%) patients had no complaints regarding pain after the surgical procedure was performed. Bleeding per rectum was relieved in 61(43 %) patients. Constipation was relieved in 53(37.3%) patients and 43 (30.28%) patients had no complaints regarding hard stools. Increased anal tone was relieved in 73(51.4%) patients, and 29(20.4%) had no sentinel pile.

Table 3: Features relieved postoperatively (n=142).

Signs Symptoms Relieved	Number of Patients (f)	Percentage (%)
Pain	116	81.7
Bleeding per Rectum	61	43.0
Constipation	53	37.3
Hard stools	43	30.28
Increased Anal Tone	73	51.4
Sentinel pile	29	20.4

Table 4 shows solid, liquid and gas stool incontinence in patients. Solid stool incontinence was experienced sometimes by 08(5.6%) patients. Liquid stool incontinence was experienced sometimes by only 01(0.7%) patient. Gas stool incontinence was rarely experienced by 02(1.4%) patients and sometimes by 10 (7.0%) patients.

Table 4: Faecal Incontinence experienced by patients (n=142).

Faecal Incontinence	Never f (%)	Rarely f (%)	Sometimes f (%)
Solid Stool	134 (94.4)	-	8 (5.6)
Liquid Stool	141 (99.3)	-	01 (0.7)
Gas Stool	130 (91.5)	02 (1.4)	10 (7.0)

DISCUSSION

A common disease, anal fissure causes considerable discomfort, loss of working days and reduction in quality of life.^{21,22} Males are more commonly affected than females as revealed in our study and others.^{5,21}

Anal fissure affects all age groups, particularly young adults.²³ Mean age in our study was 42.5 years which is comparable to the mean age of 30-45 years reported in various studies.^{23,24}

Painful defecation and bleeding per anum were the most common complaints in our study as observed in other studies as well.^{2,5-7}

Skin tag was found at the lower end of fissure in 25.4% patients in our study which has been observed as unusual finding overlying the fissure in various studies the resting pressure in the anal canal is largely a function of the internal sphincter. The continuous partial contraction of the sphincter is due to an internal myogenic tone and alpha adrenergic nerve mediated pathology.¹² Patient with chronic fissure have a raised resting anal pressure due to hypertrophy of the internal sphincter.²⁵ Complete and instant healing rate was observed after lateral internal sphincterotomy in our study. Ninety to 95% healing rate has been mentioned in the guidelines by American Society of Colon and Rectal Surgeons.⁹

Complications related to wound like pain, Re-bleeding and wound sepsis were not seen in our study as compared to others.^{26,27} Incontinence occurred in 14.78% of patients in our study. Minor but potential incontinence has been described.⁵ Incontinence rate of up to 35% has been reported in some studies.²⁸ Lateral Internal Sphincterotomy was the preferred procedure in our study which has been reported with encouraging results and less postoperative complications in various studies.^{29,30}

CONCLUSION

Lateral Internal Sphincterotomy is safe, effective and a less expensive procedure that leads to quick symptomatic improvement and healing in chronic anal fissure with minimal complication rates.

LIMITATIONS

Retrospective data are not well organized and lacks many essential variables of interest. Secondly the follow up visits were not strictly followed by the patients and the consultants as well which created issues for statistical workup. The outcomes of lateral internal sphincterotomy could not be compared with other advanced techniques. Quality of Life data including the social, financial, and familial aspects were not available.

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