Journal of Cardiovascular Disease Research

ISSN: 0975-3583, 0976-2833 VOL15, ISSUE 01, 2024

OUTCOMES OF LATERAL SPHINCTEROTOMY IN CHRONIC ANAL FISSURE- AN OBSERVATIONAL STUDY BASED ON CLINICAL FOLLOW UP

Dr. Brijesh Kumar Shukla,[1*] Dr. Amit Kumar,[2] Dr. Ritambhara Mishra[3]

[1*]MBBS, MS, Assistant professor, Department of General Surgery, Maharaja Suheldev Autonomous State Medical College, Bahraich, Uttar Pradesh
[2]MBBS MS, Associate Professor and Head, Department of General Surgery, Maharaja Suheldev Autonomous State Medical College, Bahraich, Uttar Pradesh
[3]MBBS MD, Senior Resident, Department of Pathology, King George Medical College Lucknow, Uttar Pradesh

Corresponding author: Dr Brijesh Kumar Shukla
Email id: sbrijeshmbbs@gmail.com

Type of Study: Original Research Paper

==========

ABSTRACT

Background: Chronic anal fissure is a benign disorder that is associated with considerable discomfort. Lateral internal sphincterotomy (LIS) remains the gold-standard treatment of chronic anal fissure (CAF).

Aim: The present study was conducted to assess outcomes of lateral splinterotomy in chronic anal fissure.

Methods: 65 patients underwent lateral splinterotomy in chronic anal fissure of both genders. Patients were recalled regularly and outcome was evaluated.

Results: Out of 65 patients, males were 30 and females were 35. common complaints were pain during defecation in 92%, rectal bleeding in 84%, pruritis in 25%, constipation in 48% and perianal discharge in 14%. The common complications were rectal bleeding in 27%, perianal abscess in 4%, perianal hematoma in 3.7% and recurrence of lesion in 1.6%. Pain relief was seen at first week in 65%, at second week in 74%, at fourth week in 82% and at eighth week in 96% patients. The difference was significant ($P< 0.05$).

Conclusion: LIS is the gold standard for the treatment of chronic anal fissure and patients found good pain relief. Common complication found was rectal bleeding.

Key words: Anal fissure, Lateral internal sphincterotomy, Pain

INTRODUCTION

Anal fissure is a longitudinal tear in anoderm under the dentate line which mostly located posteriorly in the midline (90%). It is a longitudinal split or tear of the anal canal extending proximally from the anal verge towards the dentate line. Although it involves only the epithelial layer of the distal anal canal at the outset, it may eventually involve its full thickness. Fissures occur most often in the posterior midline and less often anteriorly owing to the relatively poor blood supply of the posterior commissural region.[1] It is one of the most common benign diseases of anorectal area.[1] The main presenting symptom is pain during defecation, rectal bleeding, and emotional stress that it causes may reduce people's quality of life. The healing of the chronic anal fissures takes longer than 8-12 weeks and in addition a

ISSN: 0975-3583, 0976-2833 VOL15, ISSUE 01, 2024

hypertrophic papilla and a sentinel tubercle accompany the chronic anal fissure and the sphincter muscle fibers at the base of the tear are exposed.[2]

Fissures typically involve the internal anal sphincter and this goes into spasm and impedes healing by moving the two margins apart and diminishing the blood supply to the region. This, in addition to the exposure to fecal matter, accounts for the delays in the healing of fissures. When a fissure has been present for more than 6 weeks, it is referred to as chronic. A chronic anal fissure (CAF) is distinguished by the presence of features such as a sentinel skin tag and hypertrophied anal papilla on examination.[3]

Surgical treatment includes anal dilatation and posterior or lateral internal sphincterotomy. Finger anal dilatation is generally viewed by many colorectal surgeons to be an obsolete method as it has been associated with anal incontinence. Calibrated and controlled procedures with anal dilatators or pneumatic balloons have been developed.[4]

Lateral internal sphincterotomy (LIS) remains the gold-standard treatment of chronic anal fissure (CAF). LIS lowers the pressure exerted by the internal anal sphincter (IAS), restores normal perfusion of the anoderm, and leads to fast and durable pain relief and healing of the fissure, with a general complication rate of less than 7%.[5] Recent innovations regarding nonsurgical alternatives have included the administration of topical nitrates (glyceryl trinitrate or isosorbide dinitrate) or botulinum toxin (Botox\, Allergan, Irvine, CA) injections targeted to relax the IAS.[6]

Despite the initial excitement, randomized trials have revealed that topical glyceryl trinitrate is inferior to both Botox\5 and LIS6, in providing symptomatic relief and fissure healing.[7] The present study was conducted to assess its clinical feasibility and effectiveness of lateral splinterotomy for chronic anal fissure.

MATERIALS & METHODS

The present study was conducted in general Surgery department comprised of 65 patients selected for lateral splinterotomy in chronic anal fissure of both genders. All were well informed and their informed written consent was obtained.

Demographic profile of all patients such as name, age, gender etc. was recorded. A thorough clinical examination of the site was carried out. Lateral splinterotomy (LIS) were carried out in the lithotomy position with open sphincterotomy under general or regional anaesthesia. The anal canal was visualized with an anoscope, a longitudinal incision was made in the anoderm, and the distal half of the internal anal sphincter was divided under direct vision followed by closure of the mucosa. Internal anal sphincter was almost completely cut in LIS. The defect was not closed.

All patients were asked to fill out a questionnaire that queried their symptoms. Anal pain was assessed before the treatment and at follow-up visits using a linear visual analog pain score.

Pain during defecation, rectal bleeding, pruritis, constipation, perianal hematoma and perianal discharge were assessed.

Anal incontinence was assessed by means of a validated scoring and grading system, as reported by Pescatori et al. Patients were recalled regularly and outcome of treatment was recorded. All the data was noted in excel sheet and tabulated. Statistical analysis of data in this study was performed using SPSS (version 19 SPSS Inc., Chicago, Illinois, USA). For continuous variables, descriptive statistics were calculated.

ISSN: 0975-3583, 0976-2833 VOL15, ISSUE 01, 2024

RESULTS

Out of 65 patients, males were 30 and females were 35 as shown in table 1. Table II, graph I shows that common complaints were pain during defecation in 92%, rectal bleeding in 84%, pruritis in 25%, constipation in 48% and perianal discharge in 14%. The difference was significant (P< 0.05).

Table III, graph II shows that common complications were rectal bleeding in 27%, perianal abscess in 4%, perianal hematoma in 3.7% and recurrence of lesion in 1.6%. The difference was significant (P< 0.05).

Table IV shows that pain relief was seen at first week in 65%, at second week in 74%, at fourth week in 82% and at eighth week in 96% patients. The difference was significant (P< 0.05).

DISCUSSION

The American Society of Colon and Rectal Surgeons (ASCRS) guidelines recommend initial nonsurgical management, which includes stool softeners, high fiber diet and warm sitz bath. However, a significant proportion of patients will fail conservative management, therefore further treatment options will be required. Lateral internal sphincterotomy (LIS) is attributed to be the gold standard for surgical management of chronic anal fissures when conservative and medical treatment fails. Besides its efficiency, LIS also have some risks of complications. Although incontinence, which is the most common and the feared one of those complications, was transient in most of the cases, 3% of the cases were considered to have it permanently at the end of the 72 months of follow up.

We found that out of 65 patients, males were 30 and females were 35. Common complaints were pain during defecation in 92%, rectal bleeding in 84%, pruritis in 25%, constipation in 48% and perianal discharge in 14%. The study results were similar to the Perry WB et al.[8]

Nelson RL et al[9] in their study stated the safe and adequate option of lateral internal sphincterotomy (LIS) in chronic anal fissure treatment. 417 patients who were treated for chronic anal fissure were included. 228 (54.7%) were female and the mean age was 36.1 years (ranging from 17 to 73 years). Major complaints of patients; pain, bleeding, constipation, pruritus, perianal discharge. Recurrence occurred in 15 patients (3.6%) (12 males, three females) and eight patients (1.9%) developed incontinence (four with gas, four with soiling and seven females, one male). The complaints of all patients with gas incontinence and a patient with fluid incontinence regressed, whereas three patients had permanent fluid incontinency.

We found that common complications were rectal bleeding in 27%, perianal abscess in 4%, perianal hematoma in 3.7% and recurrence of lesion in 1.6%. our findings were correlated with the results mentioned by Hsu TC et al.[10] Mentes BB et al[11] had different results than our study.

We found that pain relief was seen at first week in 65%, at second week in 74%, at fourth week in 82% and at eighth week in 96% patients. Mentes et al[14] in their study the fecal incontinence Quality of Life Scale was administered to any patient who had a Fecal Incontinence Severity Index score greater than 0 at 12 months postoperatively. The mean preoperative Gastrointestinal Quality of Life Index score was 118.34 T 6.33, which developed to 140.74 T 2.38 postoperatively (P < 0.001). At the two-month follow-up, 18

ISSN: 0975-3583, 0976-2833 VOL15, ISSUE 01, 2024

patients (7.38 percent) had a fecal Incontinence Severity Index score greater than 0. By 12 months, the number of patients with fecal Incontinence Severity Index score greater than 0 was reduced to seven (2.87 percent). These seven patients had a Gastrointestinal Quality of Life Index score similar to that of the group with postoperative fecal Incontinence Severity Index score of 0, and only three patients (1.22 percent) had evident deterioration in the Fecal Incontinence Quality of Life Scale. The 12-month total Gastrointestinal Quality of Life Index score of the three patients who developed anal abscess/fistula after sphincterotomy (139.33 T 3.21) was similar to the Gastrointestinal Quality. Acar T et al[12] had similar results in their study.

Cadedu et al[13] in their study, 200 consecutive patients with chronic anal fissure, non responsive to previous treatment with nitroglyerin ointment or nifedipine, underwent LIS. Duration of operation, postoperative pain, duration of hospital stay, postoperative complications, time to resumption of work, recurrence and time to recurrence were assessed in all patients. The median operative time was 11 minutes (range 5–20); the median postoperative pain VAS score was 2 (range 0– 4); every patient was mobilized on between 2 and 4 hours after surgery; the median hospital stay was 8 hours (range 7–10); the median time off work was 11 days (range 5–20 days). Neither impairment of faecal incontinence nor relapse was detected in all patients at the end of observational period.

CONCLUSION

Pain during defecation, rectal bleeding, pruritis, constipation, perianal hematoma and perianal discharge were found significant. Authors found that LIS is the gold standard for the treatment of chronic anal fissure and patients found good pain relief. Common complication found was rectal bleeding. Surgeons need to be certain of the extent of sphincterotomy to perform, and patients should be informed about the advantages and disadvantages of both treatment choices. Future studies are needed for further details and patient selection criteria to determine the individual, ideal extent of sphincterotomy.

REFERENCES

1. Brady JT, Althans AR, Neupane R, et al. Treatment for anal fissure: is there a safe option? Am J Surg. 2017;214:623-628.
2. Collins EE, Lund JN. A review of chronic anal fissure management. Tech Colorectal. 2007;11:209-223.
3. Gil J, Luja´n J, Herna´ndez Q, Gil E, Salom MG, Parrilla P. Screening for the effectiveness of conservative treatment in chronic anal fissure patients using anorectal manometry. Int J Colorectal Dis. 2010;25:649-654.
4. Wald A, Bharucha AE, Cosman BC, Whitehead WE. ACG clinical guideline: management of benign anorectal disorders. Am J Gastroenterol. 2014;109:1141-1157.
5. Andjelkov K, Sforza M, Barisic G, Soldatovic I, Hiranyakas A, Krivokapic Z. Novel method for treatment of chronic anal fissure: adipose-derived regenerative cells e a pilot study. Colorectal Dis. 2017;19:570-575.
6. Acheson AG, Scholefield JH. Anal fissure: the changing management of a surgical condition. Langenbeck's Arch Surg. 2005; 390:1-7.

ISSN: 0975-3583, 0976-2833 VOL15, ISSUE 01, 2024

7. Yucel T, Gonullu¨ D, Oncu¨ M, Koksoy FN, Ozkan SG, Aycan O. Comparison of controlled-intermittent anal dilatation and lateral internal sphincterotomy in the treatment of chronic anal fissures: a prospective, randomized study. Int J Surg. 2009;7:228-231.
8. Perry WB, Dykes SL, Buie WD, Rafferty JF. Standards practice task force of the American Society of Colon and Rectal Surgeons Practice parameters for the management of anal fissures (3rd. revision). Dis Colon Rectum. 2010;53:1110-1115.
9. Nelson RL, Chattopadhyay A, Brooks W, Platt I, Paavana T, Earl S. Operative procedures for fissure in ano. Cochrane Database Syst Rev. 2011;9:CD002199.
10. Hsu TC, MacKeigan JM. Surgical treatment of chronic anal fissure. A retrospective study of 1753 cases. Dis Colon Rectum. 1984;27:475-478.
11. Mentes BB, Tezcaner T, Yılmaz U, Leventoglu S, Oguz M. Results of lateral internal sphincterotomy for chronic anal fissure with particular reference to quality of life. Dis Colon Rectum. 2006;49:1045-1051.
12. Acar T, Acar N, Güngör F, Kamer E, Güngör H, Candan MS, Bağ H, Tarcan E, Dilek ON, Haciyanli M. Treatment of chronic anal fissure: Is open lateral internal sphincterotomy (LIS) a safe and adequate option?. Asian journal of surgery. 2019;42:5:628-33.
13. Cadeddu F, Selvaggio I, Muzi MG, Andreoli F, Amabile D, Milito G. Complications and results of lateral internal sphincterotomy for chronic anal fissure. In BMC Geriatrics 2009; 9:1:1-1.

TABLES

Table I: Distribution of patients

Total- 65		
Gender	**Males**	**Females**
Number	30	35

Out of 65 patients, males were 30 and females were 35.

Table II: Characteristics of patients

Complaint	Percentage	P value
Pain during defecation	92%	0.01
Rectal bleeding	84%	
Pruritis	25%	
Constipation	48%	
Perianal discharge	14%	

Graph I: Characteristics of patients

ISSN: 0975-3583, 0976-2833 VOL15, ISSUE 01, 2024

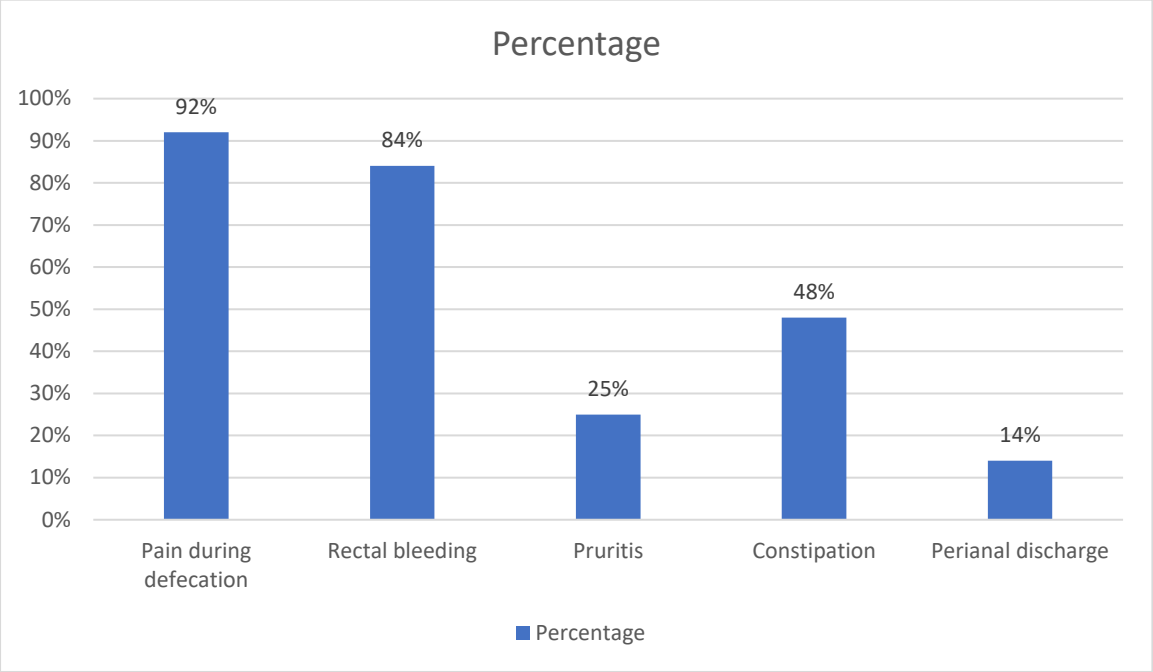

Table III Early and late complications outcomes

Complications	Percentage	P value
Rectal bleeding	**27%**	0.021
Perianal abscess	4%	
Perianal hematoma	3.7%	
Recurrence of lesion	1.6%	

Graph II: Early and late complications outcomes

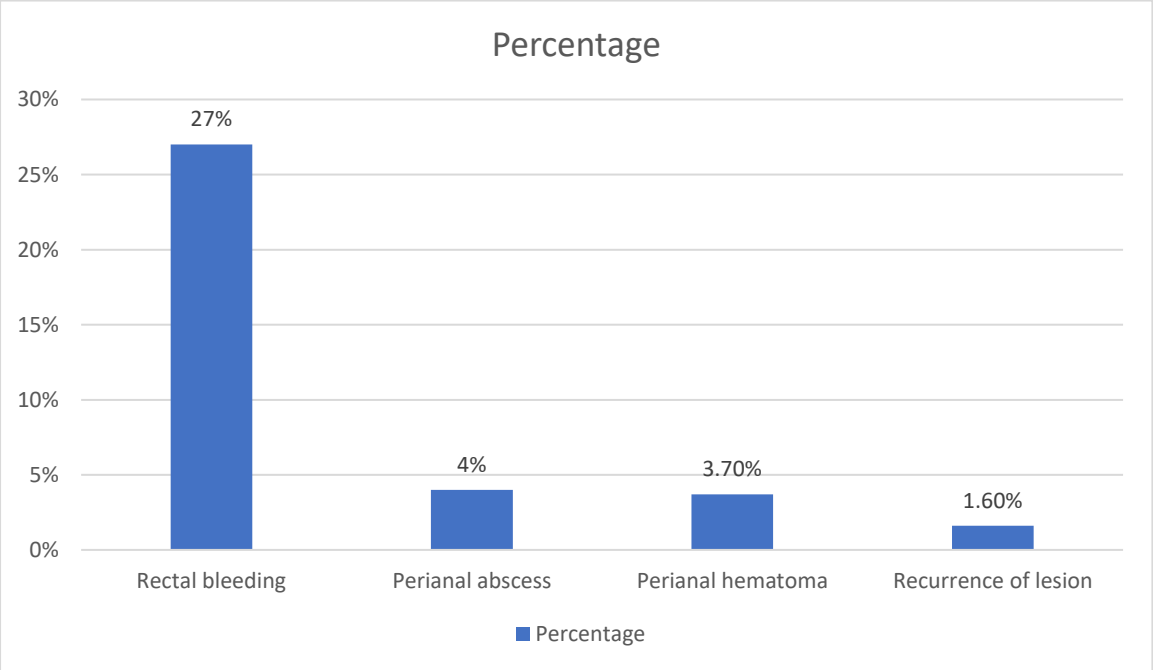

Table IV: Assessment of pain relief

Duration	Percentage	P value

ISSN: 0975-3583, 0976-2833 VOL15, ISSUE 01, 2024

First week	65%	0.05
Second week	74%	
Fourth week	82%	
Eighth week	96%	