

Original Research Article

Results of tailored lateral sphincterotomy for chronic fissure-in-ano

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ABSTRACT

Background: Fissure-in-ano is one of the common and most painful anorectal conditions encountered in surgical practice. In spite of several conservative treatment options, surgical treatment in the form of lateral anal sphincterotomy remains the gold standard of treatment for chronic anal fissure, however it is associated with the significant rate of incontinence. This study reviews using a tailored lateral sphincterotomy by selecting the height of internal sphincter to be divided with aim of preserving more sphincter and hence reducing the incontinence rates.

Methods: The study was carried out in 50 patients who were diagnosed clinically as chronic anal fissure attending Surgery department of ESIC medical college and hospital, Kalburagi over a period of 6 months from January 2019 to August 2019. Tailored left lateral internal sphincterotomy was performed in all patients. The date was recorded and analysed. Early post-operative follow-up was maintained every week for four weeks or till the fissure healed. Complications mainly incontinence rate was assessed.

Results: Common age group was third and fourth decade of life. Pain (100%) was the commonest symptom. Majority of the patients (96%) had posterior fissure. Postoperatively about 97% patients had complete pain relief. Only one patient (2%) in the study reported incontinence to flatus during the first follow-up visit and had minor incontinence and other minimal complications were found.

Conclusions: Tailored lateral anal internal sphincterotomy is safe and effective surgical procedure for the management for chronic anal fissure with lower rate of incontinence rate compared to gold standard lateral internal sphincterotomy.

Keywords: Fissure-in-ano, Lateral sphincterotomy, Incontinence rate, Tailored left lateral internal sphincterotomy

INTRODUCTION

Anal fissure is an ulcer in the long axis of lower anal canal.¹ The underlying pathophysiology of anal fissure is multifactorial and involves anodermal ischaemia, infection, chronic constipation and hypertonicity of the smooth muscle of the internal anal sphincter.² Posterior fissure is most common because there is a lack of tissue support posteriorly within the anal canal and due decreased blood supply.

Majority of the patients suffering from anal fissure are from young age group. The main presenting symptom is pain during defecation, rectal bleeding and constipation. The treatment for anal fissure usually comprises reducing the sphincter pressure with physical or chemical methods, relaxation of the sphincter, atraumatic passage of stools and pain relief.³ Options included in medical management are change in dietary habits, high fluid intake, warm sitz bath/laxative and local muscle relaxants like calcium channel blockers (nifedipine and diltiazem), application

of isosorbidedinitrate or intra-sphincteric injection of botulinum toxin.⁴

Lateral internal sphincterotomy (LIS) is attributed to be the gold standard for surgical management of chronic anal fissures when conservative treatment fails.^{5,6} Besides its efficiency, LIS also have some risks of complications. Although incontinence, which is the most common and the feared complication which varies between 0-30% for flatus, 0-20% for liquid incontinence and 0-5% for solid stool incontinence.⁷ This can be reduced using tailored sphincterotomy. The aim of this study to know the effectiveness of tailored lateral sphincterotomy in chronic anal fissure and its complications

METHODS

The study was carried out in 50 patients at surgery department of ESIC Medical College and Hospital, Kalburagi over a period of 6 months from January 2019 to August 2019.

Inclusion criteria

- Age above 18 years who diagnosed clinically with chronic anal fissure

Exclusion criteria

- Age less than 18 yrs.
- Any history of previous anal surgery.
- Patient with systemic diseases (Diabetes Mellitus, chronic liver disease and collagen vascular diseases).
- Patients with acute anal fissure
- Pregnant women
- Other anal diseases like haemorrhoids, fistula, perianal abscess, inflammatory bowel disease and rectal cancer.

Methodology

After taking ethical clearance from committee. With Informed and written consent from patient. The procedure was performed under spinal anaesthesia under all aseptic precautions with patient in lithotomy position. Pre-operative single iv antibiotic and enema was given to all these patients.

On Per rectal examination -Site and length of fissure noted followed by careful palpation of inter sphincteric groove is made with left hand index finger. On identifying both sphincters incision is made through inter sphincteric plane size using 15 no surgical blade. Sphincter divided tailored according to length of fissure without opening the anal mucosa. The mainstay is, the incision is controlled by the left-hand index finger in order to cut only the half of the sphincter fibres, i.e., the width below the dentate line. Following which digital

pressure is maintained for few minutes to secure hemostasis. Sterile dressing method followed.

Postoperatively all the patients were subjected to daily sitzbath, laxatives and fibre supplement diet. Patients were discharged on second postoperative day with advice to have sitz bath for next two weeks.

Post-operative follow-up was done every week for two weeks or till the fissure healed followed by biweekly follow-up till a total of 8 weeks. Patients were followed to observe for post-operative complications mainly incontinence (to flatus or fecal matter) and persistence of pain, infection, recurrence, constipation and to know effectiveness of surgery.

The results of the study were tabulated and analysed in MS excel by number and percentages.

RESULTS

Fifty patients were enrolled for this study. Thirty eight (76%) patients were females and twelve (31.94%) were males. Age ranged from 18-64years. Maximum incidence of anal fissure was noted in third and fourth decade of life with 66% of study population in the age group of 31-40 years. Twenty-eight percent of population was in the age group of 40-50 years.

Pain during defecation was the main symptom at presentation (100%) in all the patients. Pain was present for more than a month in all patients. Forty one (82%) patients had bleeding per rectum. Constipation was present in 36 (72%) patients (Figure 1).

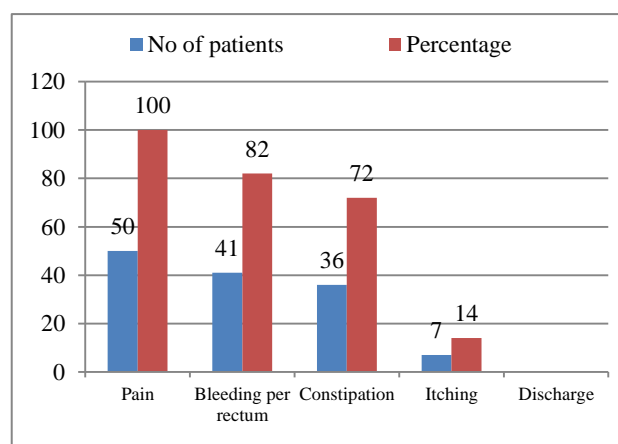


Figure 1: Symptoms.

Ninety-six (96%) patients had a posterior midline fissure. Postoperative about 97% patients had complete pain relief. Only one patient (2%) in the study reported incontinence to flatus during the first follow-up visit and had minor incontinence (Figure 2). Fissure healed in forty-eight (96%) patients within a period of 4 to 8 weeks. Constipation was reported in two patients (4%).

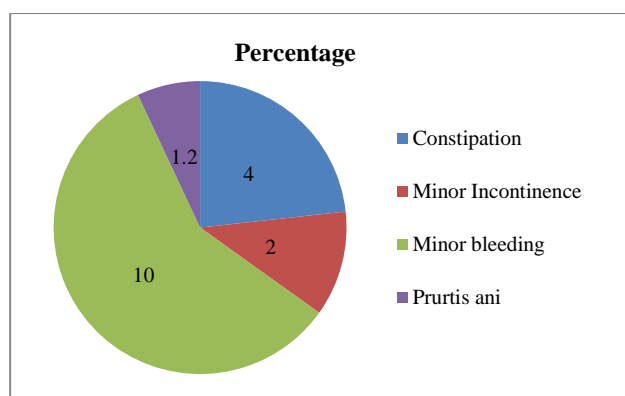


Figure 2: Complication of surgery.

DISCUSSION

The anal fissure is an ulcer in the skin lined part of the anal canal. It occurs most frequently in young adults and affects both sexes equally.⁸ The great majority of fissures occur in the posterior midline, although anterior midline fissures are seen in women in reproductive age group and 8% in men. In present study the age ranged from 18 years to 64 years with most frequent age group of 31-40 years having 66% study population followed by 40-50 years with 28% study population. This is comparable to the study conducted by Cohen et al.⁹ In this study 96% of the patients had a fissure posteriorly and 4% had fissures anteriorly. These results are also at par with the results of Fiducia et al who reported 89% posterior midline fissure.¹⁰

Out of 50 patients studied, 12 were male (24%) and 38 were female (76%) patients. Pain was the most common symptom (100%), often associated with bleeding per rectally (82%) followed by constipation (72%) and pruritus ani (14%). While studying the clinical presentations of anal fissures Petros et al, have found that pain, bleeding and pruritus were the commonest symptoms.¹¹

Faecal incontinence is the most feared complication following conventional LIS. Incontinence rate of 2% (Incontinence to flatus) was reported in our study. Other studies also reported similar rate of incidence as Hsu and Mac Keigan reported no post-operative soiling.¹² Pernikoff et al reported 4.4% flatus incontinence and 0.04% faecal incontinence.¹³ However, Rosa et al reported only 0.04% gas incontinence other minor complications like bleeding, constipation and itching are negligible.^{14,15}

In our study, complete healing of fissures occurred in 85% within 4 weeks post-operatively and by the end of 8 weeks fissures healed in 96% patients. The average time taken for fissure healing after lateral internal sphincterotomy was three and a half weeks in PR Hawley's series.¹⁶ There was no recurrence of anal

fissure observed in this study group within the timeframe of this study.

CONCLUSION

Tailored lateral anal internal sphincterotomy is safe and effective surgical procedure for the management for chronic anal fissure with lower rate of incontinence rate compared to gold standard lateral internal sphincterotomy and other minimal postoperative complications.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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