

Original Research Article

Is open lateral anal sphincterotomy really a safe and satisfactory treatment option for refractory chronic anal fissures? - a prospective study

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ABSTRACT

Background: Chronic anal fissure is a familiar entity in surgical outdoor departments of hospitals in our valley. The muslim women are usually reluctant to expose their anal canal related pathologies to male surgeons, letting anal fissures to reach the chronic stage. Under this background, the present study was conducted to look for the feasibility of lateral anal sphincterotomy in the management of chronic anal fissure in our patients.

Methods: This prospective study was carried out over a period of 3 years in the unit 2nd of department of surgery at SMHS (Shri Maharaja Harisingh) hospital, an associated hospital of Government Medical College Srinagar. During this period, 59 patients presented to the outpatient department with typical chronic anal fissures and were included in this study.

Results: Fifty-nine patients, diagnosed on clinical evaluation as chronic anal fissure were included in this study. The age varied from 19 to 58 years with mean age of 36.38 ± 7.14 (SD= 7.14) years. There was a female predominance, with a female to male ratio of 2.1:1. Fifty-two (88.1%) patients had posterior midline fissure and 7 (11.8%) patients had an anterior anal fissure. Thirty-one patients were not satisfied with the conservative treatment and insisted for surgical management. All 31 patients were managed by open lateral anal sphincterotomy.

Conclusions: Lateral anal sphincterotomy (LAS) is a safe and effective method of management for chronic refractory anal fissures. The complications are minimal and negligible.

Keywords: Anal fissure, Lateral anal sphincterotomy, Midline posterior, Pain

INTRODUCTION

Anal fissure is a tear in the anoderm distal to the dentate line. It can be categorized as acute or chronic. The diagnosis can typically be confirmed by physical examination and anoscopy in the office if tolerated by the patient. By gentle separation of the buttocks and examination of the anus, a linear separation of the anoderm can be identified at the lower half of the anal canal. Approximately 90% of anal fissures in both men

and women are located posteriorly in the midline. It is hypothesised that this predilection for the posterior midline may occur because this portion of the anal canal is poorly perfused.^{1,2} The classical vicious cycle formed by pain, and consequently, internal sphincter spasm that leads to fissure formation causes pain in anoderm.^{3,4} Anterior anal fissures affect approximately 10% of patients and may have a different pathophysiology. They are associated with younger, mostly female, patients often with injury to or dysfunction of the external anal

sphincter. In less than 1% of patients the fissures are lateral or multiple.⁵ Chronic fissures are characterized by sentinel tag, hypertrophic anal papillae, anal sphincter spasm, and fibrosis. Chronic fissures are more difficult to treat conservatively.⁶ Patients with chronic anal fissure frequently need surgical intervention despite advent of multiple conservative modalities including local injection.⁷ Now a day, several techniques are accepted for the management of CAF (chronic anal fissure). Among those techniques, anal dilatation is the most common one with recently added lateral sphincterotomy (LS) for the internal anal sphincter.⁸ Lateral anal sphincterotomy has been accepted as the gold standard treatment for chronic fissures.^{9,10} 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.¹¹ Chronic anal fissure is a familiar entity in surgical outdoor departments of hospitals in our valley. The Muslim women are usually reluctant to expose their anal canal related pathologies to male surgeons, letting anal fissures to reach the chronic stage. Also, the common meat eating practice in the Muslim majority Kashmir valley is a risk factor for constipation and chronic anal fissure. Under this background this study was conducted to look for the feasibility of lateral anal sphincterotomy for the management of chronic anal fissures in our patients.

METHODS

This prospective study was carried out in the unit 2nd of department of surgery SMHS (Shri Maharaja Harisingh) hospital, an associated hospital of Govt. medical college Srinagar, over a period of 3 years from January 2015 to December 2017.

Exclusion criteria

The patients with the diagnosis of acute anal fissures and those with atypical anal fissures, e.g., crohn’s disease, tuberculosis, etc., were excluded from the study. Other patients with the diagnosis of chronic anal fissure were included in the study.

Aim of the present study was to look for the feasibility of lateral anal sphincterotomy for the management of chronic anal fissures in our patients.

During the study period, 59 patients presented to the outpatient department with chronic anal fissure and were included in this study. A thorough clinical assessment of the patients was done. History was sought from the patients about the events leading to the symptoms, the presentation, and examination was done to confirm the diagnosis. All the patients were put on conservative management initially but 31 patients were not satisfied with same. They were counseled about the efficacy, advantages and disadvantages of all the available

treatment options for chronic anal fissures. Under the background of this full information these 31 patients opted for open lateral anal sphincterotomy.

Statistical analysis

The recorded data was compiled and entered in a spreadsheet (Microsoft Excel) and then exported to data editor of SPSS Version 20.0 (SPSS Inc., Chicago, Illinois, USA). Continuous variables were expressed as Mean ±SD and categorical variables were summarized as frequencies and percentages.

RESULTS

In this study, conducted over a period of 3 years, 59 patients were included with a diagnosis of chronic anal fissure. All of the patients were diagnosed on clinical evaluation. The age varied from 19 to 58 years (Table 1) with mean age of 36.38±8.14 (SD=7.14) years. Fourteen patients (23.7%) presented in the age group of 20-30 years, 32 patients (54.23%) were from age group of 30-40 years and 12 patients belonged to age group of above 40 years.

Table 1: Age distribution.

Age group	Number of patients (%)
10-19	1 (1.7%)
20-29	14 (23.7)
30-39	32 (54.23%)
≥40	12 (20.3%)
Total	59

There was a female predominance with a female to male ratio of 2.1:1 (40 female and 19 male patients). Fifty-two (88.1%) patients had posterior midline fissure and 7 (11.8%) patients had an anterior anal fissure. All the patients were put on conservative management initially with sitz bath, laxatives, local application of diltiazem and dietary advice. Twenty-eight patients were satisfied with the conservative management and reported improvement in their symptoms and 7 patients developed intermittent exacerbation of symptoms due to noncompliance with dietary and medical advice. Thirty-one patients were not satisfied with the above treatment and insisted for surgical management. All 31 patients were managed by open lateral anal sphincterotomy. With the patient in lithotomy position clear identification of the internal sphincter was done after making a 1 cm circumanal incision in 3 o’ clock position.

Sphincter segment was hooked with curved artery forceps (Figure 1) and divided with electrocautery (Figure 2) or by scissors. Then, pressure was maintained for few minutes to ensure good hemostasis. Wound was kept open for healing through secondary intention. Post operatively patients were managed by sitz bath with savlon and local application of antibiotic ointment.

Wound in all the patients healed satisfactorily. Pain relief was assessed postoperatively by visual analogue scale (VAS) at 1 week, 3 weeks and 7 weeks. Pain relief was obtained by the end of 7th week in all of the 30 patients who came for follow-up. Patients were followed up, over a period ranging from 2 months to 3 years. Thirty patients reported complete satisfaction and one patient did not follow up. Post operative complications included bleeding in one patient (3%). This patient reported back 24 hours after discharge in view of postoperative bleeding, which was managed conservatively. Also, mild fecal incontinence was reported in another patient (3%) in our study, which subsided after six months of sphincterotomy.



Figure 1: Identification of internal sphincter.



Figure 2: Process of division of internal anal sphincter.

DISCUSSION

The age of studied patients ranged from 19 to 58 years with mean age of 36.38 ± 8.14 (SD=7.14) years. This is comparable with the mean age reported in other studies, which range from 30 to 45 years.¹²⁻¹⁵ In the present study, women outnumbered men, with a ratio of 2.1:1. This is in contrast to sex distributions observed in other studies.

Nahas et al, reported that 70% of their patients with CAFs were men and 30% were women, with a ratio of 2.3:1.¹⁶ Melange et al, reported that 55.2% of their patients with CAFs were men and 47.8% were women, with a ratio of 1.15:1.¹⁷ In present study 31 patients were managed by lateral anal sphincterotomy. There are many modalities for the treatment of CAFs, but so far surgical lateral internal sphincterotomy remains the gold standard. The treatment of anal fissures by sphincterotomy was first suggested in 1818 by Boyer.¹⁸ Since the introduction of lateral internal sphincterotomy by Eisenhammer S, in 1951, this procedure has been used with increasing frequency and is now considered the treatment of choice for CAFs.¹⁹ Notaras MJ, described subcutaneous lateral internal sphincterotomy in 1971.²⁰ The main goal of sphincterotomy is to increase the blood flow of the anoderm by decreasing the maximum anal sphincter pressure by 18-50%. This technique provides an improvement between 82% and 100%.²¹ In comparison to other surgical and medical treatment modalities, sphincterotomy remains the most effective and successful method of management in patients with chronic anal fissure.³ Pain relief was assessed postoperatively by visual analogue scale (VAS) at 1 week, 3 weeks and 7 weeks. Pain relief was obtained by the end of 7th week in all of the 30 patients who came for follow-up. Similar results were obtained in other studies. Araujo et al, performed a prospective clinical trial with 190 patients in three groups comparing medical treatment (n: 128) vs. LIS (n: 62) and reported pain relief rates of 100% for LIS after eighth week (93% in two weeks and 100% at the end of the eighth week).²² Vaithianathan et al, evaluated preoperative and postoperative first, fourth and sixth week pain relief by visual analogue scale (VAS) in 45 patients who underwent LIS. Pain relief was obtained in almost all patients at the end of the sixth week.²³ Patients were followed up in our study, over a period ranging from 2 months to 3 years. Thirty patients reported complete satisfaction and one patient did not follow up. A study, in which results of Botox and LIS were compared, showed that only 7% of the patients in LIS group were dissatisfied with their treatment.²⁴ This rate was 1% in a single center study by Salih AM.²⁵ Post operative complications in our patients included bleeding in one patient (3%) which was managed conservatively. Also, mild fecal incontinence was reported in another patient (3%) in the present study, which subsided after six months of sphincterotomy. FI after LIS usually occurs mildly (soiling or flatus incontinence) and lasts only for few weeks up to 6 months; even so some authors had reported persistent fecal incontinence for 12 months after LIS surgery.²⁶⁻²⁸ A novel meta-analysis showed that long-term risk of incontinence after LIS is significant (approximately 15%) with the obvious fecal incontinence rate of 1%.²⁹

CONCLUSION

Lateral anal sphincterotomy is a safe and effective method for management of chronic refractory anal

fissures. Lateral anal sphincterotomy does not lead to uncontrolled and unpredictable damage to the anal sphincter as is the case with anal dilatation. The complications are minimal and negligible. Incontinence is not a common problem. The patients feel a great sigh of relief from this chronic painful condition after lateral anal sphincterotomy.

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