
Chronic Anal Fissure - A Prospective Study

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Abstract

Background: Chronic anal fissure is one of common anal condition of world population. Conservative management is initially recommended with ointments and analgesics. When conservative measures fail despite of recommended length of therapy, surgical option is offered to the patients. Lateral sphincterotomy is a surgical option recommended and accepted worldwide. The pre amble of the study was to assess lateral sphincterotomy in terms of safety and final outcome for the surgical management of chronic anal fissure.

Patients and Methods: 120 diagnosed cases of chronic anal fissure admitted during 1st July 2013 to 30th June 2014 in the Department of surgery in Dhiraj Hospital, SBKS MI&RC affiliated to Sumandeep Vidhyapeeth University, Pipariya, Vadodara, Gujarat were included in study. Patients with anal fissure with other peri-anal conditions, recurrent anal fissure, hepatitis positive, and children's were excluded from the study. The data was recorded and analyzed. Post-operative follow-up was maintained every two weeks for six visits (12-weeks). Any complication was recorded on history and physical examination.

Results: Out of 120 diagnosed cases of anal fissure, common age group was 31-40 years (49%) and most of the patients were females with male to female ratio of 1:1.7. Pain (100%) was the commonest symptom followed by constipation (82%). 79% had posterior fissure, while 20% patients had anterior fissure, while 1% patient had anterior as well as posterior fissure. The mean duration of post-operative hospital stay was 3 days. All patients turned up for first follow up visit at 2nd week and no complaints were filed except flatus incontinence by only 2% cases. Total 33% patients were lost during follow up while only 3% patients complained flatus incontinence on 6th and 12th week follow up. No recurrence or faecal incontinence was reported by any patient.

Conclusion: Lateral sphincterotomy is safe and effective surgical management for chronic anal fissure with minimal postoperative complications.

Keywords: Chronic anal fissure; Lateral sphincterotomy; Outcome.

1. Introduction

Anal fissure is a very common acute condition that is presented in majority of the world population. It is the most common cause of severe anal pain. The pain may be so severe that patients may avoid defecation for day's altogether, until they are severely constipated. This delay leads to hardening of the stools, which further tears the anoderm during defecation, setting a vicious cycle [1,2]. Classic features of chronic anal fissure are failure to respond conservative therapy, a fibrous anal polyp, an external skin tag (sentinel pile), visible haemorrhoid, hardening at the edges of fissure, exposed fibers of the internal sphincter at the floor of the fissure, infected base of fissure, and a bridged fissure with underlying fistula [1,2]. The treatment of chronic anal fissure is conservative and surgical [3]. The options are anal dilatation, carbon

dioxide laser surgery, fissurectomy with dorsal sphincterotomy and lateral sphincterotomy, which was introduced by Eisenhammer in 1951 and was popularized by Notaras in 1969 [1-5].

The Standard Task Force of the American Society of Colon and Rectal Surgeons has recommended lateral sphincterotomy as the method of choice for the surgical treatment of chronic anal fissures [6]. This method is most favoured worldwide due to its safety, simplicity, minimal anesthesia requirement and good results [1,4,7]. However, there are studies which do not report satisfactory results in terms of faecal incontinence and recurrence [3].

The significant risk of persistent disturbance in anal continence has been reported following lateral sphincterotomy, which varies between 0-30% for flatus, 0-

20% for liquid incontinence, and 0-5% for solid stool incontinence [3,8,9] while the recurrence rate varies from 0-6% [4].

The purpose of this study was to assess the safety and outcome results of lateral sphincterotomy in our setup.

2. Material and Methods

This Prospective Case study was conducted in the Department of surgery, in Dhiraj Hospital, SBKS MI&RC affiliated to Sumandeep Vidhyapeeth University, Pipariya, Vadodara, Gujarat from 1st July 2013 to 30th June 2014. During this period of study 175 patients presented with chronic anal fissure all were initially advice analgesic, antibiotic, manual anal dilation and high fibre diet. 45 patients respond to conservative management; however response to conservative management was quite unsatisfactory in 125 cases. Therefore they were advice surgical management. 3 patients preferred to wait further and refused for the surgical intervention, 1 patient having history of recent myocardial infarction were excluded and another 1 case having has haemorrhoidectomy in the past were also excluded. Finally 120 patients with chronic anal fissure underwent surgical intervention after obtaining written consent. After baseline investigations done and anesthesia fitness obtained these patients underwent lateral sphincterotomy either under spinal or general anesthesia.

As we do not have the facility of anorectal electromanometry, we performed digital rectal examination under anesthesia just before surgery to assess the tone the anal sphincter, while lateral sphincterotomy preceded by digital anal dilatation.

The indoor post-operative and follow-up 12 week data of these patients was recorded on predesigned proforma. Post-operative follow-up was maintained every three weeks for six visits (18-weeks). Any complication especially, incontinence (flatus, liquid and solid stools) and recurrence of symptoms and non-healing ulcer was recorded.

3. Results

120 cases of anal fissure were included in the study. Frequent age group was 31-40 years (59%) followed by 41-50 years (27%) (Figure 1). There was female preponderance with a male to female ration of 1:1.7 (Figure 2). Although pain was presenting feature found in all patients of this series, however its severity and duration varied from patient to patient. Eighty four percent patients (84%) had constipation while remaining (16%) had normal consistency of stool. 78% had bleeding per rectum it was bright red in color and was sufficient enough in most patients to streak the stool and in some to soil the under garments. 36% patients complained of itching, while only 3 patients had discharge (Table 1). Out of 120

patients, 93% had posterior fissure and 23% had anterior fissure (Figure 3).

The mean duration of hospital stay was 3 days. However wound of 78% cases took 1 week to heal, 20% wounds took 2 weeks to heal while only 2% wounds took longer than 2 weeks to heal (Table 2). During this study we observed that after lateral sphincterotomy 89% of our patients were symptoms free while 11% had persistence of symptoms but with decreased intensity.

Patients were followed up for 18 weeks. All patients turned up for first follow up visit at 3rd week and no complaints were filed except flatus incontinence by only 2% cases. Up to 6th week 20% patients were lost to follow up 3% more patients (13%) were lost for follow up till 18th week and 3 patients reported flatus incontinence. No recurrence or faecal incontinence was reported by any patient (Table 3 and 4).

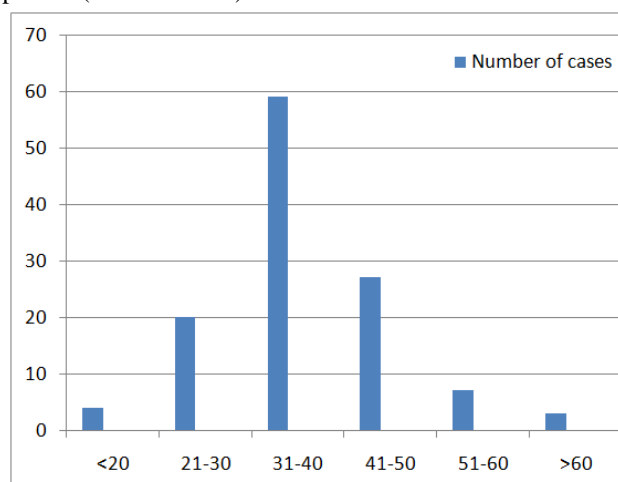


Figure 1: Age Distribution

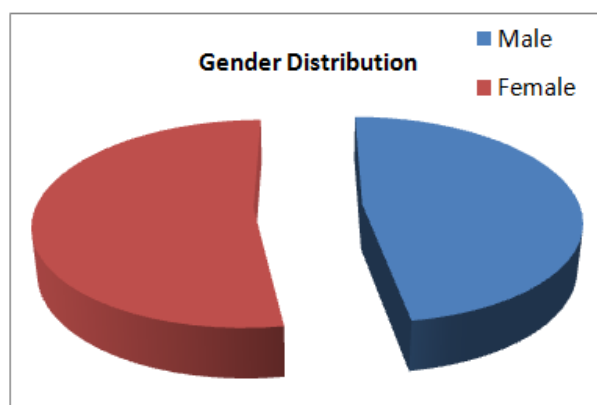


Figure 2: Gender Distribution

Table 1: Presenting complaints

Clinical features	Frequency (in %)
Pain	100
Constipation	82
Bleeding P/R	78
Itching	36
Discharge	3

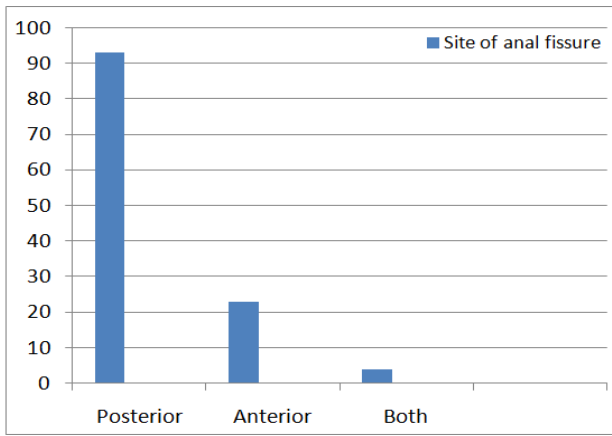


Figure 3: Site of Anal Fissure

Table 2: Healing Time

Healing time	Frequency (in %)
1 week	98
2 week	20
>2 weeks	2

Table 3: Complications of Surgery

Complications	Frequency (in %)
Flatus incontinence	2
Discharge	2
Local infection	3
Pruritis ani	10

Table 4: Follow up (in %)

	3 rd week	6 th week	18 th week
Complete follow up	100	80	77
Incomplete follow up	0	20	33
Flatus incontinence	2	3	3
Faecal incontinence	0	0	0
Recurrence	0	0	0

4. Discussion

Chronic anal fissure is the most common cause of anal pain associated with internal anal sphincter hypertonia. Lateral sphincterotomy achieves permanent reduction at sphincter hypertonia [10]. Conservative treatment can only provide temporary reduction [11]. Anal fissure is a common and distressing problem. This original study is comprised of 120 cases, while Jensen *et al.* [12] conducted a similar study recruiting 58 subjects, Gui *et al* [13] upon only 10 patients. However larger scale studies were also conducted on 1355 patients by Khubchandani *et al* in 1989 [14] Anal fissures occur roughly equally in both sexes. However few studies show a male to female ratio of 1:2.6 [15] while other had reported male to female ratio of 2:3 [16]. It is evident from these studies that the most of these patients were females. Similarly in present study most of the patients were females. Any age group may be affected by anal fissure. However it is uncommon at the

extreme of age. In present study the age ranged from 13 years to 61 years with most frequent age group of 31-40 years having 59% study population followed by 40-50 years with 27% comparable to another study [14]. Regarding presentation of the patients, pain is the main symptom which is severe and follows defecation and lasts for many hours. In this study, also pain was the most common and consistent feature of all the patients (100%) followed by Bleeding per rectum (78%) which was bright red and sufficient enough to streak the stool and Constipation (82%) while few patients (36%) had pruritis ani and discharge was seen in very few patients (3%). The fissure is always situated in the vertical axis of the anal canal. The usual site for anal fissure is mid line; however lateral fissures are seen in diseases like Crohn’s disease, ulcerative colitis, tuberculosis, syphilis and HIV etc. In this study 93% of the patients had single fissure posteriorly and 23% had fissures anteriorly. However 4% patients had fissure both anteriorly and posteriorly. These results are also at par with the results of Fiducia *et al* [17] who reported 89% posterior midline fissure, 6.5% anterior and 4.5% synchronous anterior and posterior fissures. During this study we observed that after lateral sphincterotomy 89% of our patients were symptom free, while 11% had persistence of symptoms but with decreased intensity. These results are comparable to other studies i.e. Viso Pons *et al* [18] and Rosa *et al* [19] also reported similar results i.e. 95% symptomatic relief. Mean hospital stay of patients in this study was 3-days while wound healing time was 27 days. Out of 100 patients 3% had flatus incontinence and none had reported faecal incontinence. These results are again at par with other studies; like Pernlkoff *et al* [17] who reported 4.4% flatus incontinence and 0.04% faecal incontinence. However Rosa *et al* [19] reported only 0.04% gas incontinence. Recurrence was not reported by any patients in this study within 6 months follow up period. Similar results were also reported by other researchers like Cho *et al* [20], and Milito *et al* [21] who observed no recurrence. However Casillas *et al* [22] reported 5.6% recurrence of fissure in ano. As discussed above it is obvious that lateral sphincterotomy has satisfactory results with regard to symptomatic relief, incontinence and recurrence of fissure in ano.

5. Conclusion

We conclude that lateral sphincterotomy is safe and effective treatment of choice for chronic anal fissure due to symptomatic relief and rare impairment of continence for flatus and faeces and less chances of recurrence.

References

- [1] Ahmad N, Aziz M, Faizullah. Closed lateral internal sphincterotomy under local anesthesia in OPD in the treatment of chronic anal fissure. *Ann King Edward Med Uni* 2004; 10:11-2.
- [2] Farooq A, Niaz Z. Comparative study of lateral internal sphincterotomy versus topical glyceryl trinitrate for treatment of fissure-in-ano. *Ann King Edward Med Uni* 2003; 9: 278-81.
- [3] Sokol T, Marks JW Anal fissure (torn rectum) – causes and treatment options.
- [4] Ram E, Alper D, Stein GY, Bramnik Z, Dreznik Z. Internal anal sphincter function following lateral internal sphincterotomy for anal fissure: a long-term manometric study. *Ann Surg* 2005; 242: 208-11.
- [5] Poritz LS (2006) Anal fissure. *E Med J Medscape spec.*
- [6] Lindsay I, Cunningham C, Jones OM, Francis C, Mortensen NJ. Fissurectomy-botulinum toxin: a novel sphincter-sparing procedure for medically resistant chronic anal fissure. *Dis Colon Rectum* 2004; 47: 1947-52.
- [7] Gillett BP, Paidas CN (2006) Anal fissure. *E Med J Medscape spec.*
- [8] Nariani MG, Chaturvedi R, Jatania J Anal fissure: a comparison of conservative treatment versus surgical methods. *BHJ Issue Special.*
- [9] Gupta PJ. Treatment of anal fissure – revisited. *Shiraz E-Med J* 2006; 7: 1-7.
- [10] Liratzopoulos N, Efremidou EI, Papageorgiou MS, Kouklakis G, Moschos J, *et al.* Lateral subcutaneous internal sphincterotomy in the treatment of chronic anal fissure: our experience. *J Gastrointestin Liver Dis* 2006; 15: 143-7.
- [11] Fiducia G, Bosco V. Partial left lateral subcutaneous sphincterotomy for anal fissure: role and results. *Chir Ital* 2006; 58: 501-4.
- [12] Jensen SL, Lund F, Nielson OV, Tange G. Lateral subcutaneous sphincterotomy versus anal dilatation in the treatment of fissure-in-ano in outpatients: a prospective randomized study. *Br Med J* 1984; 289: 528-30.
- [13] Gui D, Cassetta E, Anastasio G, Bentivoglio AR, Maria G, *et al.* Botulinum toxin for chronic anal fissure. *Lancet* 1994; 344: 1127-8.
- [14] Cohen A, Dehn TC. Lateral subcutaneous sphincterotomy for the treatment of anal fissure in children. *Br J Surg* 1995; 82: 1341-2.
- [15] Mazier WP. Keyhole deformity: fact and fiction. *Dis Colon Rectum* 1985; 28: 8-10.
- [16] Khubchandani IT, Reed JF. Sequelae of internal sphincterotomy for chronic fissure-in-ano. *Br J Surg* 1989; 76: 431-4.
- [17] Pernikoff BJ, Eisenstat TE, Rubin RJ, Oliver CG, Salvati EP. Reappraisal of partial lateral sphincterotomy. *Dis Colon Rectum* 1994; 37: 1291-5.
- [18] Viso Pons L, Beatobe Muntada J. Internal lateral sphincterotomy results. *Rev Esp Enferon Dig* 1989; 75: 589-92.
- [19] Rosa G, Lolli P, Piccinelli D, Mazzola F, Zugni C *et al.* Calibrated lateral internal sphincterotomy for chronic anal fissure. *Tech Coloproctol* 2005; 9: 127-31.
- [20] Cho DY. Controlled lateral sphincterotomy for chronic anal fissure. *Dis Colon Rectum* 2005; 48: 1037-41.
- [21] Milito G, Arullani A, Brancaleone C, Cesca D, Filingeri V *et al.* Subcutaneous lateral internal sphincterotomy in the treatment of chronic anal fissure. *Ital J Surg Sci* 1983; 13: 275-9.
- [22] Casillas S, Hull TL, Zutshi M, Trzcinski R, Bast JF. Incontinence after a lateral internal sphincterotomy: are we underestimating it? *Dis Colon Rectum* 2005; 48: 1193-9.