ORIGINAL RESEARCH PAPER

Volume-7 | Issue-2 | February-2018 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

STUDY OF CHRONIC FISSURE-IN-ANO AT OUR INSTITUTE:

General Surgery

Dr Bhavin K. Shah*	Associate Professor, Department of General Surgery, Sumandeep Vidyapeeth, Pipariya Vadodara. *Corresponding Author
Dr Naveen Kumar	Resident, Department of General Surgery, Sumandeep Vidyapeeth, Pipariya Vadodara
Dr Ketul Shah	Senior Resident, Department of General Surgery, Sumandeep Vidyapeeth, Pipariya Vadodara

ABSTRACT

Anal fissure is common cause of anal pain. Exact aetiology of anal fissure is not known, but it is commonly seen due to constipation and hypertonic anal sphincter conditions. Studies on the method of treatment of anal fissure ranges from medical application to surgery. We have study of 200 cases of fissure in Ano for comparing in between treatment options of anal dilatation (AD) and lateral anal sphincterotomy (LAS). Patients were divided in two groups by randomly.

In our study it has been shown that all the patients after anal dilatation significantly reduces the anal pain and provide symptomatic relief that is slightly better than lateral anal sphincterotomy.

KEYWORDS

Anal dilatation, fissure in Ano, Lateral anal sphincterotomy.

Introduction:

Anal fissures are considered one of the commonest causes of severe anal pain. An anal fissure is a longitudinal tear or ulcer in the distal anal canal. It is usually located in the posterior or anterior midline and extends from the level of dentate line to the anal verge. Acute fissure is one which presents within 3-6 weeks of symptom onset. Anal fissure is the most common cause of severe anal pain. The pain of anal ulcer is intolerable and always disproportionate to the severity of physical lesion. It may be too severe that patient may avoid defecation [1]. The etiology of anal fissure is not known. Anal fissure generally arise with local trauma cause by difficult defecation due to hart stool and internal sphincter hypertonic which in turn reduces blood flow to post wall and results in higher anal canal pressure even at rest. Thus anal canal often become chronic [2]. Studies on the method of treatment of chronic anal fissure ranges from medical application to surgery. There is no general agreement on ideal therapy for chronic anal fissure [3]. Recamier et al.; is widely cited as giving the first description of anal stretching. Since then, its popularity for treatment of anal fissure has waxed and waned [4]. It has the appearance of a clean longitudinal tear in the anoderm with little surrounding inflammation. Acute fissure usually heals spontaneously within 6 weeks. A chronic fissure, with more than 6 weeks of symptoms, is usually deeper and generally has exposed internal sphincter fibers in its base. It is frequently associated with a hypertrophic anal papilla at its upper aspect and sentinel pile at its distal aspect. Based on etiology it is classified as primary (idiopathic) or secondary. Secondary fissures are those that occur due to some other pathology such as Crohn's disease, anal tuberculosis, AIDS. Patients usually present with pain during defecation and passage of bright red blood per anus. The precise etiology of anal fissure is unknown. Fissure is most commonly attributed to trauma from the passage of a large hard stool, but it is also seen after acute episodes of diarrhea. Painful fissures are generally associated with involuntary spasm of the internal sphincter with high resting pressure in the anal canal. So, it seems that chronic over activity of the internal sphincter may be the cause. Reduction of anal sphincter spasm results in improved blood supply and healing of fissure.

Its uses recommended by Good shall by the turn of the century and later by Gabriel and other surgeon support this procedure because of its simplicity. But Rick Nelson et al.; did a systemic review and they found and stretching significantly increases the rate of flatus incontinence. [5] Mohammad Tyab et al.; studied the role lateral anal sphincterotomy (LAS) in the surgical treatment anal fissure. They conclude the LAS are safe and suitable procedure for patients with chronic anal fissure [6, 7]. We have therefore carried out a controlled prospective trial of two procedures performing in our department to compare the cure rate, post-operative complication and cost effectiveness between anal dilatation and lateral anal sphincterotomy in patients of chronic anal fissure.

MATERIAL AND METHODS:

Total 200 patients with posterior anal fissure, age 18 to 70 years of age were enrolled in our study between September 2015 and September 2017. Chronic anal fissure was defined as 'an ulcer in lower portion of anal canal with sentinel pile and hypertrophic anal papillae'. Patients with inflammatory bowel disease, AIDS, tuberculosis, STD or medical related condition were excluded from this study. The study was carried out after fully explanation to the patient and informed written consent was obtained from all patients. Patients were asked to fill out questionnaire that queried their symptoms. Anal pain was assessed before beginning of treatment and at follow up using a linear visual analogue pain scale. Total 200 patients were divided in two groups by simple random sampling and were allotted to procedure four finger anal dilatation (AD) group A, lateral anal sphincterotomy (LAS) group B. Patient was follow up after 6 weeks and further data regarding the post-operative complications and other problem were obtained. Surgical technique Under spinal anesthesia anal dilatation was done by placing fully lubricated index finger of each hand in anal canal after one and other. Then exerting gentle but continuous outward pressure and with gradual relaxation of the internal sphincter middle finger of each hand was also placed in the anal canal. During this procedure the hand repeatedly moved all around in order to relax all the segment of the lower part of the internal sphincter. The procedure was stop when the internal anal sphincter was so much relax that the anal canal was accepting four fingers (two fingers of each hand) at a time without much force. LAS were done by division of internal anal sphincter up to 4 mm from medial to lateral.

RESULTS:

No significant difference was detected between gender and age distribution of the patients. (Table-1).

Table:1:Age and Sex Distribution:

	Anal Dilatation(Group A)	LAS Group (Group B)	P Value
Sex Distribution	Male: 68	Male: 64	Non Significant
	Female : 32	Female: 36	
Mean Age	42.5 years (18-70)	41.2 years(18-70)	Non Significant

The distribution of pain, rectal bleeding and constipation which were presenting symptom of patients were not significantly different between the groups. Following Anal Dilatation the complains of pain in 80 patients out of 90, rectal bleeding in all 79 patients and constipation 78 out of 80 were significantly reduced. Following LAS complaining of pain 74 out of 89, rectal bleeding 70 out of 79 and constipation 58 out 78 were significantly reduced. These data were not

significantly differing between our two groups. In Anal Dilatation (Group A) fissure healed after 6 weeks in 99 patients. No anal incontinence or other complications were noted in the group who underwent Anal Dilatation. In LAS (group B) fissure healed in 6 weeks post operative in 90 patients. In remaining 5 patients pain and constipation persisted, and to two of these patient rectal bleeding continues. Because of persistence of symptoms despite supportive treatment for one month, reoperation has offered. All the 5 patients were designated as recurrence. Four patients refused for surgery. One patient given consent. Contra lateral LAS done successfully in this patient healing was observed in one month. No incontinence was noted.

DISCUSSION: Our data of 200 patients shows that age and sex distribution of patients was mainly 30-40 years of age and male predominance which may be attributed to those population staying away from home and drinking less water thus constipation.These findings of our study were supported by various studies, which suggest that anal fissure is more common in young adult male group. [8] The most common complaint observed in patient with anal fissure were pain, rectal bleeding and constipation occur in 90% of the patient with perianal pain, 78% of patient with rectal hemorrhage and in 60% of patient with constipation. These results were supported by Morgan et al.; [9] Fries B et al.;, [10] Antebi E et al.; [11] Dupuytrens G et al.; [12] Anal dilatation is a method that has been used for a long time as fissure treatment and its advantage as it is easily applied, does not required much equipments and allowed patient to be discharge from hospital with in a day Sohn, N et al.; [13] Hancke E et al.; [14] Strugnell N.A et al.; [15] Oliver DW, [16] Boschetto, S. et al.; [17] However relapse and the anal incontinence rate after manual anal dilatation have always been controversial. In literature healing rate reported as 83- 89%. But recurrence 17% and anal incontinence 12.5% value were representing as serious disadvantage. [13,15, 16]. The short coming due to uncontrolled improper approach of manual anal dilation. In Meta analysis report, in controlled proper anal dilatation acceptable result were obtained but large prospective randomized studies were required[18]. Currently LAS is a common surgical method which is utilized for the treatment of anal fissure [3]. Inthe studies of Arroys et al.; after LAS minor incontinence was found 5% of patient, healing occur in 93-100% patients, recurrence occurred in 0-25% of patients and incontinence occur in 0-38% of patients [19]. In recent studies regarding to healing and recurrence LAS has been found better than lord anal dilatation method, [20] nitroglycerine [21] etc. Although it not statistically significant our result indicates slight superiority of manual anal dilatation.

CONCLUSION: In our study it has been shown that all the patients after anal dilatation significantly reduces the anal pain and provide symptomatic relief that is equivalent to LAS. Even with slightly better improvement in symptoms in comparison to LAS it is less invasive method for anal fissure. In our study we have seen that anal dilatation does not have any complication like incontinence or sphincter injuries. However it need more prospective and randomized controlled trials to compare to a conclusion at this stage as there is minimal literature and studies in favor of anal dilatation.

REFERENCES

1. Arroyo A, Perez F, Serrano P, Candela F, Lacueva J, Calpena R; Surgical versus chemical (botulinum toxin) sphincterotomy for chronic anal fissure: Long-term results of a prospective randomized clinical and manometric study. Am J Surg. 2005; 189: 429–434.
2. Gupta PJ; Internal anal sphincterolysis for chronic anal fissure: a prospective, clinical, and manometric study. Am J Surg. 2007; 194: 13–16.
3. Nelson R; Operative procedures for fissure in ano. Cochrane Database Syst Rev. 2005; 2:CD002199
4. Recamier JC; Extension, massage et percussion cadanceedans le traitment des contractures musculaires. Revue Medicine Francaiset Estranger 1838: 1: 74.
5. Rick nelson; Digestive system disorders anal fissure (chronic). Bmj clinical evidence. 2006 nov1. (based on January 2006 search)
6. Pernkoft BJ, Eisenstat TE, Oliver GC, Salvati EP; Reappraisal of partial lateral internal sphincterotomy. Division of colon and rectal surgery, Muhlenberg Hospital. UMDNJ Robert Wood Johnson affiliated hospital, plain field, New Jersey. Dis Colon Rectum 1994; 37: 1291-5.
7. Kortbeek JB, Langevin JM, Khoo RE, Heine JA; Chronic fissure-in-ano: a randomized study comparing open and subcutaneous lateral internal sphincterotomy. Dis Colon Rectum. 1992; 35(9):835-7.
8. "Anal Fissure - Basics - Epidemiology". Best Practice. British Medical Journal. Apr 23, 2012.
9. Morgan CN; Oil-soluble anesthetics in rectal surgery. BMJ. 1935; 2(12): 938-42.
10. Fries B, Rietz KA; Treatment of fissure in ano. Acta Chirurgica Scandinavica. 1964; 128: 312-15.
11. Antebi E, Schwartz P, Gilon E; Sclera therapy for the treatment of fissure in ano. Surg Gynecol Obstet. 1985; 160:204-6.
12. Dupuytrens G; Lecons Orales de Clinique Chirurgical. Paris: Germer-Balliere, 1833.
13. Sohn N, Eisenberg MM, Weinstein MA, Lugo RN, Ader J; Precise anorectal sphincter dilatation. Its role in the therapy of anal fissures. Dis Colon Rectum. 1992; 35: 322–327.
14. Hancke E, Schwaner, Chronische S; analfissur – operative behandlung mit anal dilatation, excision der analfissur versus lateral sphinkterotomie. Coloproctology. 2003; 25: 95– 105.
15. Strugnell NA, Cooke SG, Lucarotti ME, Thomson WH; Controlled digital anal dilatation under total neuromuscular blockade for chronic anal fissure: a justifiable procedure. Br J Surg. 1999; 86: 651– 655.
16. Oliver DW, Booth MW, Kernick VF, Irvin TT, Campbell WB; Patient satisfaction and symptom relief after anal dilatation. Int J Colorectal Dis. 1998; 13: 228–231.
17. Boschetto S, Giovannone M, Tosoni M, Barberani F; Hydro pneumatic anal dilation in conservative treatment of chronic anal fissure: clinical outcomes and randomized comparison with topical nitroglycerin. Tech Coloproctol. 2004; 8: 89–92.
18. Cho D; Controlled lateral sphincterotomy for chronic anal fissure. Dis Colon Rectum. 2005; 48:1037–1041.
19. Arroyo A, Perez F, Serrano P, Candela F, Calpena R; Open versus closed lateral sphincterotomy performed as an outpatient procedure under local anesthesia for chronic anal fissure: prospective randomized study of clinical and manometric long term results. J Am Coll Surg.2004; 199: 361–367.
20. Ram E, Vishne T, Lerner I, Dreznik Z; Anal dilatation versus left lateral sphincterotomy for chronic anal fissure: a prospective randomized study. Tech Coloproctol. 2007.
21. Brown CJ, Dubreuil D, Santoro L, Liu M, O'Connor BI, McLeod RS; Lateral internal sphincterotomy is superior to topical nitroglycerin for healing chronic anal fissure and does not compromise long-term fecal continence: six-year follow-up of a multicenter, randomized, controlled trial. Dis Colon Rectum. 2007; 50: 442–448.