ORIGINAL RESEARCH PAPER

General Surgery

A COMPARATIVE STUDY BETWEEN ANAL DILATATION VS LATERAL ANAL SPHINCTEROTOMY IN CASES OF CHRONIC ANAL FISSURE

KEY WORDS: Anal Fissure , Anal Dilatation , Lateral Anal Sphincterotomy

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ABSTRACT

INTRODUCTION: Anal Fissure presents with severe pain and bleeding. Surgical management is instituted in treatment resistant cases. Surgical treatment options are Lord's anal dilatation (AD) and lateral anal sphincterotomy (LAS).

AIMS AND OBJECTIVES: To compare AD and LAS to find superior treatment option for chronic anal fissure.

METHODS: This is a comparative study carried out in SMIMER Hospital, Surat from January 2019 to June 2019 . Total 50 patients of age between 18-50 years were included in the study.

RESULTS: In group A, patients underwent AD which has recurrence rate of 17% and anal incontinence of 12.5% . Group B patients underwent LAS. LAS healing rate and improvement in pain, rectal bleeding and constipation was 96%, 100% and 88% respectively by 2nd post-op month with no incontinence.

CONCLUSION: LAS has slightly better results in improvement of symptopms. LAS should be preffered treatment option but an option of both these methods should be given to the patient.

INTRODUCTION

Patients with fissure-in-ano present with severe pain and bleeding , more in acute condition and is diagnosed by history of pain, bleeding, discharge and constipation.[1] It occurs most frequently in young male adults.[2] It is commonly associated with sentinel pile. Majority cases occur in posterior midline (90%). Factors causing development of fissure in ano are hypertonicity of the internal anal sphincter, mucosal ischemia, chronic constipation, injury from hard stools. First-line therapy to minimize anal trauma includes bulk agents, stool softeners, topical application of ointments and warm sitz baths.[5] Surgical management is instituted in treatment resistant cases. Surgical treatment options are Lords dilatation and Lateral Sphincterotomy.

MATERIAL AND METHODS

Between January 2019 to June 2019, Total 50 patients with anal fissure, age 18 to 50 years were admitted in SMIMER Hospital. The study was carried out after full explanation to the patient and informed written consent was obtained from all patients. Total 50 patients were divided in two groups by randomization and were allotted to procedure four finger anal dilatation (AD) group A, lateral anal sphincterotomy (LAS) group B. Patients were followed up in the immediate post op period and till 6 weeks and further data regarding the postoperative complications and other problems were obtained. Under anaesthesia anal dilatation was done by placing 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 stopped 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. Lateral Internal Sphincterotomy can be performed with either "open" or "closed" techniques: [6] The open technique involves making an incision across the intersphincteric groove, separating the internal sphincter from the anal mucosa by blunt dissection, and dividing the internal sphincter using scissors. The closed technique or subcutaneous technique involves making a small incision at the intersphincteric groove, inserting a 11 number scalpel with the blade parallel to the internal sphincter with finger of opposite hand placed inside the anal canal for guiding the scalpel, advancing the scalpel along the intersphincteric groove, rotating the scalpel towards the internal sphincter and dividing it over the other finger as support in anal canal.

RESULTS

Most of the patients belonged to the age group of 21-40 with a slight male preponderance.

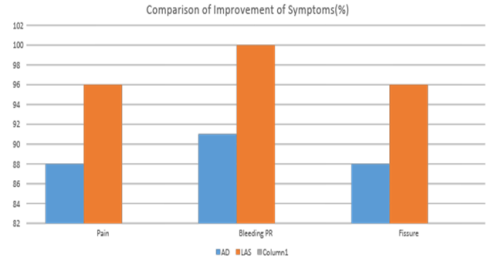
Table 1 : Distribution of Fissure after surgery

Time	AD (%) 25pts	LAS (%) 25 pts	p value
Relieved	22(88)	24 (96)	0.6092
Persists	3(12)	1(4)	

- For above mentioned data on distribution of post operative Fissure after AD and LAS, fisher's exact test p value is >0.05.
- So there is no statistically significant association of Relief from Fissure after AD and LAS.

Table 2 : Distribution of Complications after surgery

Time	AD (%) 25pts	LAS (%) 25 pts
Anal Incontinence	0(0)	0(0)
Bleeding	3(12)	1(4)
Fistula Development	0(0)	0(0)
Infection	2(08)	1(4)
Relapse	4(16)	2(08)



DISCUSSION

Our data of 50 patients shows that age and sex distribution of patients was mainly 30-40 years of age and male predominance. 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(100%), rectal bleeding(86%) and constipation(78%). These results were supported by Morgan *et al.;* [9] Fries B *et al.;*, [10] Antebi E *et al.;* [11] Dupuytrens G *et al.;* [12] Advantage of anal dilatation is that it is easily applied, does not required much equipments and allows patient to be discharge from hospital with in a day. However relapse and the anal incontinence rate after manual anal dilatation have always been controversial. The short coming is due to improper approach of manual anal dilation. The recurrence rate in AD is more as compared to LAS because fibrous band at ulcer base are broken, secondary healing occurs leading to further fibrosis at ulcer site increasing the chances of recurrence.

In LAS the fissure is not excised but the Sphincter is cut leading to primary healing. Thus chances of fibrosis are minimal. Currently LAS is a common surgical method which is utilized for the treatment of anal fissure [3].

In the studies of Arroys *et al.;* after LAS minor incontinence was found 5% of patient, healing occur in 93-100% patients, recurrence occurred in 0-2.5% of patients and incontinence occur in 0-3.8% of patients [9]. In recent studies regarding to healing and recurrence LAS has been found better than lord anal dilatation method, [12] nitroglycerine [12] etc. In our study it was observed that after LAS healing rate and improvement in pain, rectal bleeding and constipation was 96, 100 and 88 respectively. By 2nd post op. month with no incontinence occurred.

CONCLUSION

In our study it has been shown that in all the patients anal dilatation significantly reduces the anal pain and provides symptomatic relief. However, LAS has slightly better results in improvement of symptoms. Complications are also low in LAS as compared to AD. Thus LAS should be the preferred treatment option but an option of both these methods should be given to the patient.

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