Original Research Paper

Volume-10 | Issue-2 | February - 2020 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

General Surgery

"A CASE STUDY OF CHRONIC FISSURE IN ANO - COMPARISON BETWEEN TOPICAL GLYCERYL TRINITRATE (0.2%)AND LATERAL ANAL SPHINCTEROTOMY"

Dr. K. Suhas	M.S, Professor Of Surgery,asrams ,eluru
Dr. Ramkishore Vallabhaneni *	M.S (PG), Asrams, Eluru *Corresponding Author
Dr Sarath Chandrabatla	M.S (PG), Asrams, Eluru
Dr M.Vishnu Swaroop Reddy	M.S (PG), Asrams, Eluru

ABSTRACT **Aim:** The objective of my study is to compare the efficacy of topical GTN over lateral sphincterotomy in the management of chronic fissure in ano.

Methodology: This study is based on analysis of 104 patients with fissure in ano who underwent treatment in ASRAM MEDICAL COLLEGE from September 2018-2019. Patients were divided in to 52 each who were treated by medical and surgical methods respectively on a prospective basis.

Results: In this study, males were commonly affected than females. The most common age group were 41-50yrs.. Fissure in ano is rare in children and old age. Majority of the patients presented with pain during defecation. Constipation was the major predisposing factor among all cases. Most of the fissures were located in the posterior midline. Most of the patients with fissures of long duration had sentinel skin tag and hypertrophied papilla. Anterior fissures were slightly more common in females. No patients studied had inflammatory bowel disease. Patients who were treated surgically by open partial lateral anal sphincterotomy had better relief of symptoms. Around 27% patients managed medically by 0.2% GTN did not have relief of symptoms after one month of treatment, who either discontinued treatment or required conversion to surgery. Complication of Glyceryl trinitrate(GTN) is headache which occurred in majority of patients. Patients treated surgically had few complications in the preoperative period which subsided after two weeks. Pain is the most common post operative complication of lateral anal sphincterotomy. It is experienced in around 11 percentage of the patients undergoing surgery.

Conclusion: Most acute anal fissures heal with conservative measures. Those that become chronic may respond to conservative management glyceryl trinitrate 0.2% topical cream application . Persisting fissures and symptomatic patients should be considered for lateral partial internal sphincterotomy. So, in chronic anal fissure 0.2% glyceryl trinitrate application can be considered as an initial line of management

KEYWORDS :

INTRODUCTION

Anal fissure (fissure-in-ano) is a common anorectal condition. It can be a very troubling condition because, if acute, the severity of patient discomfort and extent of disability far exceed that which would be expected from a seemingly trivial lesion.

Acute anal fissures frequently respond well to conservative treatment with stool softeners and attention to local hygiene. Most anal fissures heal spontaneously. However, a small proportion of acute fissures do not heal and become chronic fissures (traditionally defined as symptoms lasting more than six weeks in duration). Once patients have had symptoms for this period, they usually do not respond to conservative measures and have traditionally needed to be treated by surgery, which includes either a partial division of the internal sphincter (sphincterotomy) or manual dilatation of the anus. Surgical treatment for this condition has been associated with the side-effect of incontinence in up to 30% of patients. Therefore, a non-surgical method for the treatment of chronic anal fissures is highly desirable. Among conservative modalities, glyceryl trinitrate (GTN) ointment is emerging as first line of treatment as it breaks the vicious cycle and relaxes the sphincter and promote the healing of chronic anal fissures. These agents cause transient relaxation of the internal anal sphincter by inducing the release of exogenous nitric oxide to the muscle tissue.

This treatment is sometimes termed a "chemical sphincterotomy," and it is not accompanied by the risk of irreversible incontinence. The major side effect of topical GTN therapy for anal fissures is that up to 40% of patients using this treatment experience headaches. On the other hand, topical modality takes longer duration for the healing of fissure and causes headache.

Due to our social traditions and taboos, patients especially ladies do not readily accept the surgical treatment and ultimately suffer for a long time. This study was to compare between topical glyceryl trinitrate and lateral anal sphicterotomy in treatment of chronic anal fissure.

METHODS AND MATERIALS

This study is based on analysis of 104 patients with fissure in ano who under went treatment in ASRAM Medical College, Eluru, from September 2018 to September 2019.

These patients were broadly divided into two groups of 52 patients each who were managed by medical and surgical methods. For all these patients clinical examinations and routine investigations were done, which also include blood for sugar, urea and serum for creatinine and ECG.

Chest X ray was taken for all cases.

Patients who are on medical management are put on 0.2% glyceryl trinitrate ointment topically over the perianal region twice daily for one month duration . They were also advised high fibre diet, adequate hydration and antibiotics T.Ciprofloxacin 500 mg bd and T.Metronidazole 400mg tid for 5 days. All patients were advised sitz bath twice daily.

Patients who are on surgical management were treated by open lateral anal sphincterotomy. Post operatively they were adviced twice daily sitz bath along with high fibre diet and adequate hydration, T.Ciprofloxacin 500mg bd and T.Metronidazole 400mg tid were given for 5 days .

Patients were observed for expected complications. Patients were discharged on 5th day. They were asked to follow up in out patient department every weekly for one month.

Observation:

This study is based on the analysis of 104 patients who were treated for Chronic Fissure in Ano in ASRAM Medical College,Eluru from September 2018 to September 2019.

AGE AND SEX DISTRIBUTION

The age and sex distribution of these 104 patients are shown in the

table. Out of these, 69 were male and 35 were female.

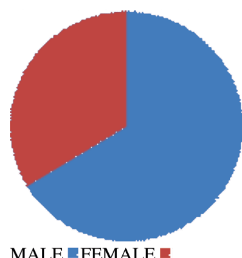
Male to female ratio is approximately 2:1. Lowest age of patients in this study is 16. Highest age of patient in this study was 62 years.

The maximum numbers of patients were in the age group of 41-50years.

TABLE 1
AGE AND SEX DISTRIBUTION

AGE GROUP	MALES	FEMALES	TOTAL	%
11-20%	5	4	9	8.7
21-30	13	6	19	18.2
31-40	17	9	26	25
41-50	25	12	37	35.5
51-60	6	3	9	18.7
>60	3	1	4	3.8

SEX DISTRIBUTION

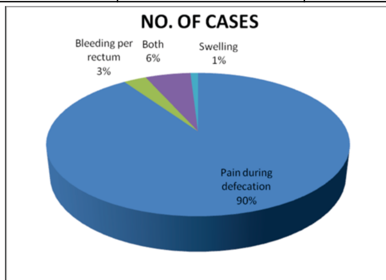


MALE FEMALE

SYMPTOMATOLOGY
The symptomatology of these patients are shown in the table. Majority of these patients had history of pain during defecation and bleeding per rectum. Other symptoms were swelling in the perianal region and retention of urine.

TABLE 2 SYMPTOMATOLOGY

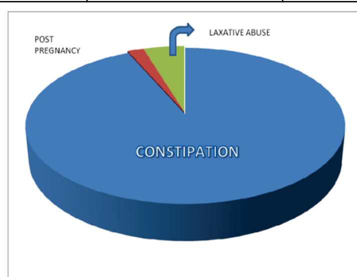
SYMPTOM	NO. OF CASES	%
Pain during defecation	94	90.3
Bleeding per rectum	3	2.8
Both	6	5.7
Swelling	1	0.9



PREDISPOSING FACTORS AND AETIOLOGY
Most of these patients had constipation as the major predisposing factor.

TABLE 3
AETIOLOGY AND PREDISPOSING FACTORS

AETIOLOGY	NO. OF CASES	PERCENTAGE
Constipation	97	93.2
Post pregnancy	2	1.9
Laxative abuse	5	4.8

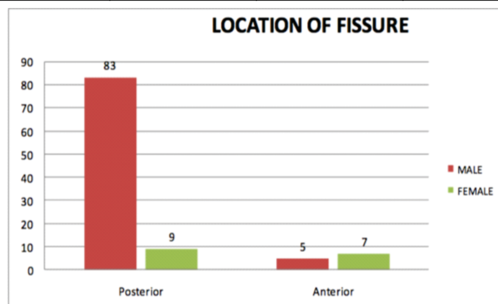


LOCATION OF FISSURE
Majority of the patients who were examined by digital rectal examination had posterior fissure in ano.

Minority of patients had anterior fissure which is more common with females. Lateral fissure was seen in few patients, the details are shown in the table.

TABLE 4 LOCATION OF FISSURE

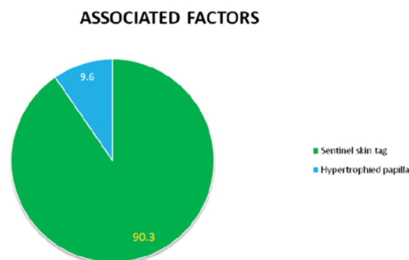
LOCA TION	TOTAL	MALE	FEMALE
Posterior	92	83	9
Anterior	12	5	7



ASSOCIATED FACTORS
Majority of patients who had fissure for longer duration had sentinel skin tag along the lower part of fissure and hypertrophied papilla in the upper part.

TABLE 5 ASSOCIATED FACTORS

ASSOCIA TED FACTORS	NO. OF CASES	PERCENTAGE
Sentinel skin tag	94	90.3
Hypertrophied papilla	10	9.6



MANAGEMENT MEDICAL
52 patients out of 104 were managed by medical and conservative method of treatment. All patients were advised high fibre diet and adequate hydration and oral antibiotics.

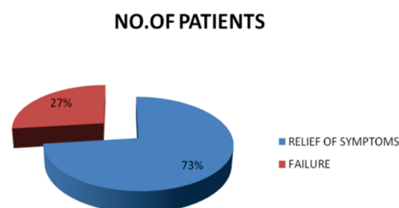
All patients were put on 0.2% Glyceryl trinitrate ointment twice daily topically after sitz bath for one month duration.

All patients were followed weekly In outpatient department for one month. Results were inferred by relief of pain and healing of fissure. 38 out of 52 patients had relief of symptoms, which accounts to 73 % of patients who were treated medically.

Other patients had persistent pain and complications like headache.

TABLE 6

	NO. OF PATIENTS	MALE	FEMALE	PERCE NTAGE
RELIEF OF SYMPTOMS	38	28	10	73
FAILURE	14	11	3	27



COMPLICATIONS OF MEDICAL MANAGEMENT

14 of the 52 patients has percipient pain and 10 patients had experienced headache as the complication of Glyceryl Trinitrate cream application

These 14 patients required conversion to surgical treatment due to failure of medical management.

SURGICAL MANAGEMENT

52 patients out of 104 were treated by surgical line of management. All patients were treated by open lateral anal sphincterotomy under spinal anaesthesia. Duration of surgery was approximately twenty minutes. 46 out of 52 patients had relief of pain and healing of fissure, which corresponds to 88.5%. Some of the patients had complications as follows.

TABLE 7

	NO. OF PATIENTS	MALE	FFMALE	PERCENT AGE
RELIEF OF SYMPTOMS	46	34	12	88.4
NO RELIEF	6	6	0	11.1

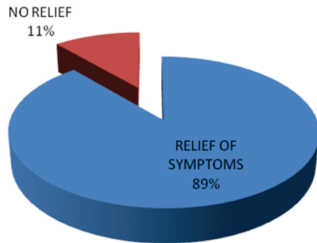


TABLE 8 COMPLICATIONS OF SURGERY

COMPLICA TIONS	NO. OF PATIENTS
PAIN	6
SEROMA	3
HEMATOMA	2
INFECTION	2
PERIANAL ABSCESS	1
FISTULA	NIL
INCONTINENCE	NIL

Most of the surgical complications subsided within two weeks and patient had complete relief of symptoms.

CONCLUSION

This prospective type of study was conducted in the Department of General surgery, ASRAM Medical College. It can be concluded that most acute anal fissures heal with conservative measures. Those that become chronic may responds to conservative management glyceryl trinitrate 0.2% topical cream application . Persisting fissures and symptomatic patients should be considered for lateral partial internal sphincterotomy. So, in chronic anal fissure 0.2% glyceryl trinitrate application can be considered as an initial line of management.

REFERENCES

1. Richard LN. Medical treatments are only marginally better than placebo, but surgery may cause incontinence. BMJ. 2003;327(354):e355.
2. Farouk R, Duthie GS, MacGregor AB, Bartolo DC. Sustained internal sphincter hypertonia in patients with chronic anal fissure. Dis Colon Rectum. 1994;37:424-9
3. Schouten WR, Briel JW, Auwerda JJ, De Graaf EJ. Ischaemic nature of anal fissure. Br J Surg. 1996;83:63-5.
4. Lund JN, Scholefield JH. Glyceryl trinitrate is an effective treatment for anal fissure. Dis Colon Rectum. 1997;40:468-70.
5. Perrotti P, Bove A, Antropoli C, Molino D, Antropoli M, Balzano A, et al. Topical Nifedipine with Lidocaine ointment versus active control for treatment of chronic anal fissure: results of a prospective, randomized, double blind study. Dis Colon Rectum. 2002;45:1468-75.
6. Maria G, Cassetta E, Gui D, Brisinda G, Bentivoglio AR, Albanese A. A comparison of botulinum toxin and saline for the treatment of chronic anal fissure. N Engl J Med. 1998;338:217-20.
7. Sileri P, Mele A, Stolfi VM, Grande M, Sica G, Gentileschi P, et al. Medical and surgical treatment of chronic anal fissure: a prospective study. J Gastrointest Surg. 2007;11:1541-8.
8. Jonas M, Neal KR, Abercrombie JF, Scholefield JH. A randomized trial of oral versus topical diltiazem for chronic anal fissures. Dis Colon Rectum 2001;44:1074-8.
9. Essani R, Sarkisyan G, Beart RW, Ault G, Vukasin P, Kaiser AM. Cost-saving effect of treatment algorithm for chronic anal fissure: a prospective analysis. J Gastrointest Surg. 2005;9:1237-43.
10. McCallion K, Gardiner KR. Progress in the understanding and treatment of chronic anal fissure. Postgrad Med J. 2001;77:753-8.
11. Schouten ER, Briel JW, Boerma MO, Auwerda JJA, Wilms EB, Gratsma BH. Pathophysiological aspects and clinical outcome of intra anal application of isosorbide dinitrate in patients with chronic anal fissure. Gut. 1996;39(3):465-9.
12. Oh C, Divino CM, Steinhaqen RM. Anal fissures 20 years' experience. Dis Colon Rectum. 1995;38:378-82.
13. Christie A, Guest JF. Modelling of economic impact of managing a chronic anal fissure, with proprietary formulation of Nitroglycerin (rectogesic) compared to lateral internal sphincterotomy in UK. Int J Colorectal Dis. 2002;17(4):259-67.
14. Richard CS, Gregoire R, Plewes EA, Silverman R, Burul C, Buie D, et al. Internal sphincterotomy is superior to topical nitroglycerine in the treatment of chronic anal fissure: results of a randomised controlled trial by the Canadian Colorectal Surgical Trials Group. Dis Colon Rectum. 2000;43(8):1048-57.
15. Mishra BM, Tripathi P, Mishra JM, Debata PK, Panda BK. Comparative study of Glyceryl trinitrate (GTN) ointment versus surgical management of chronic anal fissure. Antiseptic. 2002;99(5):150-3.
16. Palazzo FF, Kapur S, Steward M, Cullen PT. Glyceryl trinitrate treatment of chronic fissure in ano one year's experience with 0.5% GTN paste. J R Coll Surg Edinb. 2000;45:168-70.
17. Oettle GJ. Glyceryl trinitrate versus sphincterotomy for treatment of chronic fissure in ano. Dis Colon Rectum. 1997;40(11):1318-20.
18. Bacher H, Mischinger HJ, Werkgartner G, Cerwenka H, Shabrawi A, Pteiter J, et al. Local Nitroglycerin for treatment of anal fissure; an alternative to lateral sphincterotomy. Dis Colon Rectum. 1997;40(4):468-70.
19. Utizg MJ, Kroesen AJ, Buhr HJ. Concepts in pathogenesis and treatment of chronic anal fissure a review of the literature. Am J Gastroenterol. 2003;98(5):968.
20. Libertiny G, Knight JS, Farout R. Randomised trial of topical 0.2% glyceryl trinitrate and lateral internal sphincterotomy for the treatment of patients with chronic. Eur J Surg. 2002;168(7):418-21.
21. Tauro LF, Shindhe VV, Aithala PS, Martis JJS, Shenoy HD. Comparative study of Glyceryl Trinitrate ointment versus surgical management of chronic anal fissure. Indian J Surg. 2011;73(4):268-77.