ORIGINAL RESEARCH PAPER
Volume - 14 | Issue - 08 | August - 2025 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

COMPARATIVE TREATMENT OUTCOME OF ANAL FISSURE MANAGEMENT BY CONSERVATIVE AND SURGICAL APPROACH

General Surgery

Dr. Salman Khan PG JR-3 Department Of General Surgery, Hind Institute Of Medical Sciences, Barabanki, Uttar Pradesh, India

Prof. Dr. Rajendra Bahadur Singh* Professor, Department Of General Surgery, Hind Institute Of Medical Sciences, Barabanki, Uttar Pradesh, India *Corresponding Author

Prof. Dr. Vijay Kumar Goel Professor And Head, Department Of General Surgery, Hind Institute Of Medical Sciences, Barabanki, Uttar Pradesh, India

Dr. Gopi Krishna Mishra Assistant Professor, Department Of General Surgery, Hind Institute Of Medical Sciences, Barabanki, Uttar Pradesh, India

Dr. Pragya Singh Senior Resident, Department Of General Surgery, Hind Institute Of Medical Sciences, Barabanki, Uttar Pradesh, India

ABSTRACT

Anal fissure is a common anorectal disorder causing significant morbidity due to pain and discomfort. The study compares the treatment outcomes of conservative and surgical management of anal fissures among Indian patients, focusing symptom relief, recurrence, and complications. 112 patients were diagnosed with anal fissure which were equally divided into two groups: Group A received conservative management and Group B underwent surgical management. While non-surgical methods were effective for treating Acute Anal Fissures, where as the success was limited in chronic cases. Surgical procedures, particularly LIS—provided more rapid relief and fewer complications, establishing their superiority for chronic or resistant fissures. **Summary**: This study examines the clinical characteristics of Anal Fissure and compares the outcomes of conservative versus surgical treatment approaches. Findings revealed that the surgical group had a superior cure rate of 83.9%, compared to 72.4% in the conservative group, along with a notably lower recurrence rate (3.6% versus 10.6%). While conservative therapy proved beneficial for recent-onset fissures, its efficacy declined in chronic cases. Surgical intervention, especially LIS, emerged as the most reliable treatment for persistent or severe fissures, offering quicker pain relief and fewer complications. The conservative treatment remains the initial approach for acute anal fissures. However, surgical options yield better outcomes in long-standing or treatment-resistant cases. The study highlights the need for personalized management plans tailored to the patient's clinical presentation and response to therapy.

KEYWORDS

anal fissures, conservative treatment, surgical outcomes, recurrence rate, patient-specific therapy

INTRODUCTION:

A longitudinal rupture in ano-derm beneath the dentate line, which is primarily found posteriorly in the midline is called an Anal Fissure[1]. It is one of the most prevalent benign anorectal disorder, reducing patients quality of life because of excruciating pain they experience during defecation and ensuring a physical and emotional stress [2].

The exact cause is still not known. Nonetheless, it is thought to be connected to notable rise in sphincter pressure that occurs when hard stool is passed even while sphincter is at rest.[3]

Acute anal fissures often heal within 1-2 weeks, whereas chronic anal fissures requires more than 8-12 weeks.[4,5]

Risk Factors Include - Chronic constipation or chronic diarrhea, sedentary lifestyle, pregnancy and childbirth, poor dietary fiber intake, life style related stress factors.

Anal fissures are essentially treated by lowering the sphincter pressure using pharmaceutical or physical means.

As the first line of treatment, the American Society of Colon and Rectal Surgeons (ASCRS) advises conservative measures such as warm sitz baths, high-fiber diet and stool softeners.[7] Nevertheless, a sizable portion of patients do not benefit from this cautious approach.

Therefore, additional treatment options are required. The high rate of recurrence is the main drawback of medical treatment. Lateral Internal Sphincterotomy (LIS) is regarded as the gold standard.[8]

Although, LIS has its own hazards even after being an effective therapy but, according to reports, the incidence of incontinence following LIS is between 0 and 47%.[9].

MATERIAL AND METHODS :

This comparative observational Study was carried out in the Department of General Surgery, Hind Institute of Medical Sciences, Barabanki over a period of one year. The approval from the Institutional Ethical Committee was obtained before the study. Data were collected through detailed patients history, clinical examination and required investigations. Follow up was conducted at 2, 4, 6 and 8 weeks to assess the treatment outcomes.

Inclusion Criteria:

1. Age between 18 to 60 years.
2. Patients giving consent.

Exclusion Criteria:

1. Age less than 18 years and above 60 years.
2. Suspected and/ or proven Ano-rectal malignancies
3. Patients having Anal fissure with uncontrolled co-morbid conditions like diabetes mellitus.

We aimed to compare the efficacy of the topical ointment with diltiazem and/or nitroglycerin treatment. Written informed consent forms were obtained from the patient(s)and patients were informed about the treatment and the study in detail.

In Medical treatment group 8 weeks of topical ointment application 0.2% nitroglycerin or 2% diltiazem was applied every 12 hours followed by lukewarm sitz bath.

LIS was performed under either general or regional anaesthesia and the lithotomy position was used for both the LIS and partial LIS approach. After visualising the anal canal, the distal part of the internal anal sphincter was separated,the mucosa closed and a longitudinal incision was made in the anoderm.

Postoperative Management And Follow-up - For a week, oral metronidazole was prescribed twice a day along with stool softeners and NSAIDs.

Follow-up appointment was set for the 2, 4 and 8 weeks following surgery. Anorectal examination was conducted at each follow-up clinic appointment.

RESULTS:

112 patients, who were diagnosed as Anal Fissure were divided into two groups according to the treatment type

- Group A (Conservative)
- Group B (Surgical)

In both groups there is male predominance, where males were 71.5% and females were 28.5% in the group A, and in surgical approach males were 82.5% and females were 17.5% in group B out of 112 patients for Anal Fissure respectively.

Patients treated with conservative approach, complained of painful defecation being the most common symptom (85.5%) while other complaints were constipation (78%), bleeding per rectum (53.5%), burning sensation (35.5%) and discharge (10.7%) respectively. While surgically treated patients complained of bleeding per rectum (57.1%) as being most common complaint, where painful defecation (85.5%), constipation (85.7%), burning sensation (48.2%) and discharge (14.2%) are other complaints.

Table 1: Symptoms Of Patients With Anal Fissure

Symptoms	No. Of patients	Percentage
Pain during during defecation	95	85%
Constipation	87	78%
Bleeding per rectum	60	53%
Hard stool	92	80%
Perianal itching	17	15%
Diarrhea	6	5%

Table 2: Clinical Finding Of Patients With Anal Fissure

Clinical findings	No. Of patients	Percentage
Increased anal tone	112	100%
Bleeding on examination	81	73%
Tenderness	100	90%
Anterior fissure	19	17%
Posterior fissure	93	83%

Table 3: Type Of Conservative Treatment For Anal Fissure

Type of treatment given	No. of patient
Sitz bath	105
Self Anal dilatation	30
Diltiazem / Nifedipine	3
Botulinum toxin	1
Dietary modification	102
Local ointment	95
Tranquilizers	12

Table 4: Type Of Surgical Procedure Employed (n 56)

Type of procedure	No. of patients
Fissurectomy with dilatation	20
Lateral Internal Sphincterectomy	17
Advancement Flap	2
Lords procedure	11
Fissurectomy	6

Table 5: Intergroup Comparison Of Pain At Different Interval.

Intervals	Group A(n=56)		Group B (n=56)	
	No.	%	No.	%
2 weeks	48	85.7	35	62.5%
4 weeks	40	71.4	35	62.5%
6 weeks	13	23	20	35..7%
12 weeks	1	1.7	8	14.2.%

Table 6: Intergroup Comparison Of Outcome(cured/Relieved/ Recurrence)

Outcome	Group A (n=56)		Group B (n=56)	
	No.	%	No.	%
Cured	40	72.4	47	83.9
Relieved	10	17.	7	12.5
Recurrence	6	10.6	2	3.6

DISCUSSION:

Benign Anorectal Diseases are frequently encountered conditions presented to a surgical facility. Treatment options for benign anorectal conditions like anorectal fistulae are very less frequently studied. It is hypertonicity of the internal anal sphincter is contributory in the pathogenesis of anal fissure. This opinion has been supported by a highly successful surgical treatment for anal fissure- lateral internal sphincterotomy which generally lead to reduction of anal pressure[11]. In present study, we made an attempt to compare treatment outcomes of Anal fissure management by conservative and surgical approach.

Among patients with benign anorectal diseases, we found males in the most productive years of their life (72.8% male). These findings are in agreement with the observations made by Sarla who in their study found dominance of males(72.8%) Mean Age in years 37.68±13.

In a study done by Dr. Vishruth k. Raj,40% patients belonged to the age group 21-30 followed by 18% in the age group of 41-50 years. M S Varadarajan et al. [7] reported maximum number of cases inthe age group of 30 - 40 years. 42 patients out of 100 belonged to this age group while 35 patients belonged to the age group of 20-30 years. In a study done by M S Varadarajan etal.[7]themale tofemale ratio was 1.7:1 while it was 1.3:1 ina study done by Giridhar CM et al. [8] ,Jensen SL9 reported a equal male to female ratio.

In the present study, we found bleeding (48%), painful defecation (41%), constipation (28), pus discharge (21.3%) and itching (18.3%) were the most common complaints. In the present study, we primarily focused on the three most common presenting complaints. In study done by Varadarajan MSet al. [7], the most common presenting symptoms was pain during defecation which was found in 66% followed by bleeding per rectum 52%.

In a study conducted by Vishruth K. Raj [6] et al. the most common most common symptom in cases of acute fissure was pain during defecation which was found in 93% of cases and in cases of chronic fissure the most common symptom was mass at anus which was found in 76% of cases.

Torunu et al. [8] discovered haemorrhoids (44.6%) to be the most prevalent condition in comparison to the current study. A study by Aslam et al. (2010) evaluated the effectiveness of nitroglycerin ointment and lateral anal sphincterotomy in the treatment of chronic anal fissures. The success rate for patients treated with medicinal care was 50%, whereas the success rate for those treated with surgery was 93%.

According to the study by Yucel T et al, 35 (87.5%) the patients presented with perianal pain (65%) presented with rectal hemorrhage and (50%) complained of constipation. Sarla found age differences with anal fistula as most common in aged 40-50 years, while haemorrhoids being most common in age 30-40 years.

CONCLUSION:

The present study analysed the spectrum of benign anorectal diseases at our HIMS Institution. The incidence of anorectal disease in patients visiting was 21.1%. Young adults especially males within 40 years of age were most commonly affected. Pain with constipation, bleeding, pus discharge and anal / perianal itching were the most common presenting complaints. All cases diagnosed with anal fissure were treated in two groups with 56 cases in each group. When evaluating therapy results, LIS is the Gold Standard approach since it produces greater results, relieves pain more quickly with less side effects than medical procedures. For individuals who are not improving withconservative treatment, lateral internal sphincterotomy is therefore taken into consideration. Topical 0.2% GTN,0.3% nifedipine, and 2% diltiazem seem to be well-tolerated treatments. A successful medical therapy for a chronic anal fissure lowers treatment costs and hospital burden while also improving health-related quality of life.

The conservative treatment remains the initial approach for acute anal fissures. However, surgical options yield better outcomes in long-standing or treatment-resistant cases. The study highlights the need for personalized management plans tailored to the patient's clinical presentation and response to therapy.

REFERENCES :

1 Agarwal S. Anatomy of the Pelvic Floor and Anal Sphincters2012;25(1):19-21. Link
2 Bhardwaj R, Vaizey CJ, Boulos PB. Neuromyogenic properties of the internal anal sphincter: therapeutic rationale for anal fissures. Gut 2000;46:861-868. Link
3 Rao SS, Go JT. Treating pelvic floor disorders of defecation. CurrGastroenterol Rep. 2009;11(4):278–287. Link
4 McCallion K, Gardiner KR. Progress in the understanding and treatment of chronic anal fissure. Postgraduate Medical Journal 2001;77:753-758. Link
5 Schlichtemeier S, Engel A. Anal fissure 2016;39(1):14–17. Link

6 Tranqui P, Trottier DC, Victor C, Freeman JB. Nonsurgical treatment of chronic anal fissure: Can J Surg. 2006;49(1):41–45. Link
7 Villalba H, Villalba S, Abbas MA. Anal Fissure. The Permanente Journal. 2007;11(4): 62-65. Link
8 Gaj F, Biviano I, Candeloro L, Andreuccetti J. Anal self-massage in the treatment of acute anal fissure: a randomized prospective study. Ann Gastroenterol. 2017;30(4):438–441. Link
9 Foxx-Orenstein AE, Umar SB, Crowell MD. GastroenterolHepatol (N Y).2014;10(5): 294–301. Link
10 Gupta PJ. Treatment of fissure in ano Afr Health Sci. 2004;4(1):58–62. Link
11 Lindsey I, Jones OM, Cunningham C, Mortensen NJ..Br J Surg. 2004;91(3):270-9. Link
12 Altomare DF, Binda GA, Canuti S, Landolfi V. The management of patients with primary chronic anal fissure: a position paper. 2011;15(2):135–141. Link
13 Sun Z, Migaly J. Review of Hemorrhoid Disease: Presentation and Management Colon Rectal Surg. 2016;29(1):22–29. Link