ORIGINAL RESEARCH PAPER
Volume - 12 | Issue - 01 | January - 2023 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

A COMPARATIVE STUDY OF LATERAL SPHINCTEROTOMY AND 2% DILTIAZEM GEL LOCAL APPLICATION IN THE TREATMENT OF FISSURE IN ANO

General Surgery

Dr. Kajal Sharma PG Resident 3rd year.

Dr. Saurabh Goel* Head of department, Saraswathi institute of medical sciences, hapur, Uttar Pradesh.*Corresponding Author

Dr. Atul Shishodia Assistant Professor, SIMS, Hapur.

ABSTRACT

Introduction: Anal fissure is a non-healing linear tear in the distal anal mucosa below the dentate line and is a painful entity.Fissure in ano is a common proctologic disease affecting both men and womenparticularly young.They require surgery like manual anal dilation or lateral internal sphincterotomy which heal the fissure in more than 90% cases but with a significant risk of impaired anal continence. Newer non surgical therapies such as topical 2% diltiazem gel, have shown good efficacy without impairing anal continence. **AIM-** The aim of the study is to compare the efficacy of outcome of Lateral Sphincterotomy Versus 2% Diltiazem gel in the treatment of chronic fissure in ano.**Material and Methods:** 70 patients diagnosed with fissure in ano were randomly divided into 2 %Diltiazem and lateral sphincterotomy groups. Patient were followed up at regular interval for symptomatic relief and healing of fissure. **Result:** Less 89.4% patients in diltiazem group and 100% of patients in lateral internal sphicterotomy group fissure healed completely between 4-8 weeks. In the diltiazem group pain relief was fairly good. 42 patients (89.4%) had pain relief at the end of 14 weeks. But the pain relief in lateral internal sphincterotomy group was excellent with 100% patients having complete pain relief by 8 weeks. Mild headache was experienced with diltiazem patients.1 patient complained of flatus incontinence with lateral internal sphincterotomy.**Conclusion:** We conclude that lateral sphincterotomy is the gold standard treatment for the fissure in ano but chemical sphincterotomy using 2% topical diltiazem gel can be considered a good second line treatment option in those unfit for surgery or for those not willing for surgery.

KEYWORDS

fissure in ano, Sphincterotomy, pruritis ani, constipation

INTRODUCTION

- An anal fissure is a longitudinal tear or ulcer in the distal anal canal located in the posterior or anterior midline extends from the level of dentate line to the anal verge.[1,2]
- Acute fissure presents within 3-6 weeks of symptom onset as clean longitudinal tear in the anoderm with little surrounding inflammation.[2]
- Chronic fissure more than 6 weeks of symptoms, is usually deeper and generally has exposed internal sphincter fibers in its base.[2]
- Secondary fissures are due to pathology like Crohn's disease, anal tuberculosis, AIDS.2
- Patients usually present with pain during defecation and passage of bright red blood per anus.[3]
- Fissure is most commonly attributed to trauma from the passage of a large hard stool, associated with involuntary spasm of the internal sphincter with high resting pressure in the anal canal.[3]
- Surgical techniques like manual anal dilatation or lateral internal sphincterotomy, effectively heal most fissures within a few weeks but may result in permanently impaired anal continence.[4]
- Led to the alternative non-surgical treatment, such as calcium channel blockers (nifedepine, diltiazem) shown to lower resting anal pressure and heal fissures without threatening anal continence.[5,6]
- The present study compares the effect and side effects of 2% Diltiazem gel local application and internal sphincterotomy in the treatment of chronic fissure in ano.

AIM-

The aim of the study is to compare the efficacy of outcome of Lateral Sphincterotomy Versus 2% Diltiazem gel in the treatment of chronic fissure in ano.

MATERIALS AND METHODS

- This prospective, comparative study was undertaken at Saraswathi institute of medical sciences, hapur, UTTAR PRADESH.
- 70 patients with symptoms of fissure in ano for more than 6 weeks were labeled as having chronic fissure in ano after obtaining an informed written consent.
- Patients in Group 1 were advised to apply 1.5 to 2 cms length of gel twice daily at least 1.5 cm into the anus for 6 consecutive weeks. Patients were instructed to wash hands before and after use of gel.
- Cases in Group 2 underwent left lateral internal sphincterotomy under spinal anaesthesia.

OBSERVATIONS AND RESULTS

- In our study most of the cases belonged to age Group 41-50 yearsyearswith male preponderance .
- Majority of the fissures were posterior in location with sentinel pile present in 46.6% of cases.
- Four cases from Group 1, three cases from Group 2 lost to follow up hence not included in statistical analysis.

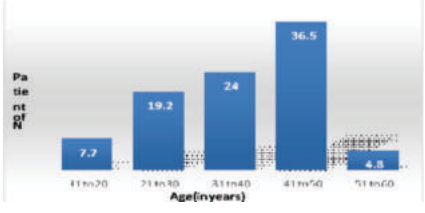

FIGURE 1- Age and sex distribution

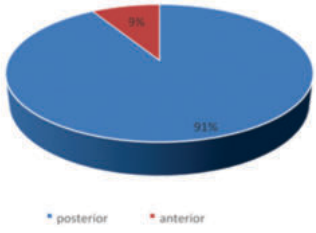

FIGURE 2- Position of fissure- in- ano

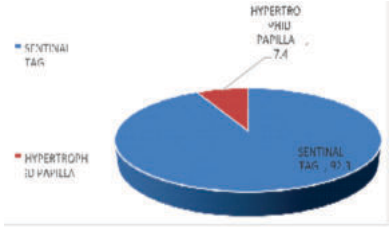

FIGURE 3-ASSOCIATED FACTORS

- As discussed earlier chronic fissure are associated with sentinel skin tag and hypertrophied anal papilla in superior and inferior aspects of fissure. 88.4% of patients in Group 1 and 100% of patients in Group 2 had completely healed fissure.

- 78.26% of patients in Group 1 who were completely healed with Diltiazem gel application and 85.18% of patients in Group 2 were free from pain at the end of 3 months.
- 3 patients in Group 1, whose fissures did not heal after 6 weeks of Diltiazem application and remained symptomatic, underwent internal sphincterotomy and fissures healed in 4 weeks after surgery.
- The mean duration of healing was comparatively longer in Group 1(5.04 weeks) than Group 2 (3.6 weeks).
- No complications were reported in either Group.

DISCUSSION

- Anal fissure is usually encountered in young or middle aged adults common in both sexes, commonly in the posterior position, although anterior fissure is comparatively common in females.
- Therapy focuses on breaking the cycle of pain, spasm, and ischemia.
- Operative management includes anal dilatation and lateral internal sphincterotomy(choice for chronic fissure).
- However complication such as permanent anal incontinence is associated with the surgery.
- Chemical sphincterotomy is now the first line of treatment in many centers [7–9].
- Calcium channel blockers like nifedipine and diltiazem have been shown to lower resting anal pressure , promote fissure healing with good healing rate [7,11,12].
- They are associated with side effects such as headache and perianal dermatitis [7].
- Healing rates of chronic anal fissure ranged from 47%-80% while that seen in our study is 88.46%.
- Side effects due to Diltiazem ranged from 0%-10% in various studies while no patient developed side effect in our study.[13]
- In contrast to surgery, chemical sphincterotomy with Diltiazem is reversible and have adverse effects on continence.
- Patients who are hypertensive, diabetic and medically unfit for surgery can be recommended treatment with Diltiazem.
- The trauma caused by surgery can be avoided and hospital stay is not required. Treatment works out to be very cost effective.

CONCLUSION-

- Chemical Sphincterotomy with Topical 2% Diltiazem should be advocated as the first option of treatment for chronic anal fissure.
- Internal sphincterotomy should be offered to patients with relapse and therapeutic failure of prior pharmacological treatment.

REFERENCES

[1] Scouten WR, et al. Ischemic nature of anal fissure. British Journal of Surgery. 1996;83:63–65. [PubMed] [Google Scholar]
[2] Tocchi Adriano, Mazzoni Gianluca, Miccini Michelangelo, Cassini Diletta, Bettelli Elia, Brozzetti Stefania. Total lateral sphincterotomy for anal fissure. International Journal of Colorectal Disease. 2004;19(3):245–49. [PubMed] [Google Scholar]
[3] Jonas Marion, Scholefield JH. Taylor I, Johnson CD. Recent advances in Surgery. 24th Edition. Churchill Livingstone; 2001. Anal fissure and chemical sphincterotomy; p. 115. [Google Scholar]
[4] Goligher John, Anal Fissure, John Goligher. Surgery of the Anus, Rectum & Colon. AITBS. (5th Edition) 1992:150. [Google Scholar]
[5] Udwadia T.E. The prophylaxis of fissure in ano. Indian Journal of Surgery. 1978;40(11):560. [Google Scholar]
[6] Boulos PB, Araujo JGC. Adequate internal sphincterotomy for chronic anal fissure: subcutaneous or open technique? British Journal of Surgery. 1984;71(5):360–62. [PubMed] [Google Scholar]
[7] Knight J. S, Birks M, Farouk R. Topical Diltiazem ointment in the treatment of chronic anal fissure. British Journal of Surgery. 2001;88(4):553–56. [PubMed] [Google Scholar]
[8] Bhardwaj R, Parker M. C. Modern perspectives in the treatment of chronic anal fissures. Annals of the Royal College of Surgeons of England. 2007;89(5):472–78. [PMC free article] [PubMed] [Google Scholar]
[9] Haq Z, Rahman M, Chowdhury RA, Baten MA, Khatun M. Chemical sphincterotomy – first line of treatment for chronic anal fissure. Mymensingh Medical Journal. 2005;14(1):88–90. [PubMed] [Google Scholar]
[10] Carapeti E, Kamm M, Evans B, Phillips R. Topical Diltiazem and Bethanechol decrease anal sphincter pressure and heal anal fissures without side effects. Diseases of the Colon and Rectum. 1999;43(10):1359–62. [PubMed] [Google Scholar]
[11] Srivastava UK, Jain BK, Kumar Praveen, Saifee Yusuf. A comparison of the effects of Diltiazem and Glyceryl trinitrate ointment in the treatment of chronic anal fissure: a randomized clinical trial. Surgery Today. 2007;37(6):482–85. [PubMed] [Google Scholar]
[12] Nash GF, Kapoor K, Saeb-Parsy K, Kunanadam T, Dawson PM. The long term results of Diltiazem treatment for anal fissure. International Journal of Clinical Practice. 2006;60(11):1411–13. [PubMed] [Google Scholar]
[13] Dasgupta R, Franklin I, Pitt J, Dawson PM. Successful treatment of chronic anal fissure with Diltiazem gel. Colorectal Disease. 4:20–22. [PubMed] [Google Scholar]