



## STUDY OF LATERAL SPHINCTEROTOMY IN THE TREATMENT OF CHRONIC FISSURE IN ANO

### General Surgery

**Dr Jagdish B Karia** Associate Professor, Department of General Surgery, Sumandeep Vidyapeeth, Pipariya Vadodara

**Dr Rutik Gandhi** Resident, Department of General Surgery, Sumandeep Vidyapeeth, Pipariya Vadodara

**Dr Ketul Shah\*** Senior Resident, Department of General Surgery, Sumandeep Vidyapeeth, Pipariya Vadodara \*Corresponding Author

### KEYWORDS

#### 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. 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. Surgical techniques like manual anal dilatation or lateral internal sphincterotomy, effectively heal most fissures within a few weeks [1,2]. Alternative non-surgical treatment, and various pharmacological agents such as nitrates (glyceryl trinitrate, isosbide dinitrate), calcium channel blockers (nifedipine, diltiazem) have been shown to lower resting anal pressure and heal fissures without threatening anal continence [3]. The present study evaluates the effectiveness and side effects of internal sphincterotomy in the treatment of chronic fissure-in-ano.

#### Materials and Method:

This prospective, comparative study was conducted at Dhiraj Hospital, Sumandeep Vidyapeeth, Pipariya Vadodara, from August 2016 to November 2017. Total 170 patients with symptoms of fissure-in-ano for more than 6 weeks were labelled as having chronic fissure in ano and were enrolled in this study after obtaining an informed written consent. Ethical approval was obtained from the local ethical committee. Inclusion criteria included patients more than 20 years of age of both sexes with grade I and II fissure-in-ano [14]. Exclusion criteria included grade III and grade IV and pregnant women. All the patients underwent left lateral internal sphincterotomy under spinal anaesthesia. Post operatively they were asked to take mild laxatives like liq. cremaffin three teaspoons at bedtime, high fiber diet and to use warm sitz baths. Cases were reviewed in Outpatient Department weekly for 6 consecutive weeks and biweekly for subsequent 3 months. At each visit questions were asked regarding pain relief, leakage of flatus/feces, and any side effects. Healing was assessed visually and defined as complete disappearance of fissure. Pain was assessed using a pain score chart graded from 0 (almost pain free) to IV (severe pain). The data was collected and analysed.

#### RESULTS:

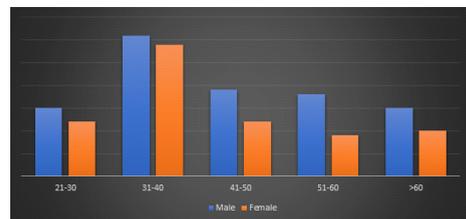
##### 1) Age and Sex Distribution:

In our study most of the cases belonged to age Group 30-40 years with slight male preponderance.

**TABLE 1: AGE AND SEX DISTRIBUTION:**

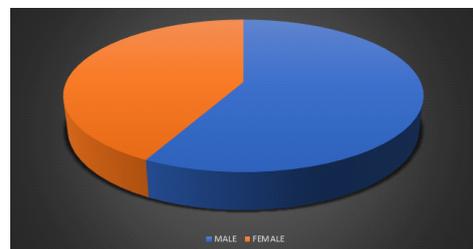
Age Group	Male	Female
21-30	15	12
31-40	31	29
41-50	19	12
51-60	18	9
>60	15	10

**FIGURE 1: AGE DISTRIBUTION:**



Male Patients are more affected as they are away from home and are working population there by decreased water intake with less fibre in diet predisposing to constipation and fissure.

**FIGURE 2: SEX DISTRIBUTION:**



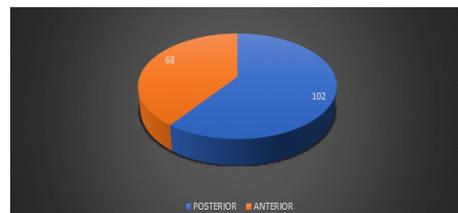
##### 2) Site of Fissure-in-ano:

**TABLE 2: SITE OF FISSURE-IN-ANO:**

LOCATION	PERCENTAGE
POSTERIOR	102(60%)
ANTERIOR	68(40%)

Majority of the fissures were posterior in location. Sentinel pile present in 80% of cases suggesting chronicity of fissure.

**FIGURE 3: SITE OF FISSURE-IN-ANO:**



Cases were followed up at weekly intervals for 6 consecutive weeks and biweekly for subsequent 3 months. Pain was treated by analgesics. No complications were reported. Healing was observed at the end of study in all of our patients.

#### DISCUSSION:

Anal fissure is a very common problem across the world. It causes considerable morbidity and adversely affects the quality of life. Anal fissure is usually encountered in young or middle aged adults [4, 5] and is equally common in both sexes [4]. It is commonly found in the posterior position, although anterior fissure is comparatively common in females [6].

Therapy focuses on breaking the cycle of pain, spasm, and ischemia thought to be responsible for the development of fissure in ano. Operative management includes anal dilatation and lateral internal sphincterotomy. Lateral sphincterotomy is perhaps the operation of choice to perform in patients with chronic anal fissure needing surgical treatment. Postoperative management is simple and rate of healing is faster. However, complication such as permanent anal incontinence is associated with the surgery. Chemical sphincterotomy is now the first line of treatment in many centres for grade I [7–9].

#### CONCLUSION:

Internal sphincterotomy is treatment of choice for 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.
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.
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.
4. Goligher John, Anal Fissure, John Goligher. *Surgery of the Anus, Rectum & Colon*. AITBS. (5th Edition) 1992:150.
5. Udhwadia T.E. The prophylaxis of fissure in ano. *Indian Journal of Surgery*. 1978;40(11): 560.
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.
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.
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.
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.
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.
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.
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.
13. Dasgupta R, Franklin I, Pitt J, Dawson PM. Successful treatment of chronic anal fissure with Diltiazem gel. *Colorectal Disease*. 4:20–22.
14. Efficacy of New Grading System (MK Grading) for Management of Fissure-in-Ano. Killedar M, Kulkarni, S.H., Maharaul, H.H. et al. *Indian J Surg* (2017). <https://doi.org/10.1007/s12262-017-1701-4>