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General Surgery

A COMPARATIVE STUDY OF LATERAL SPHINCTEROTOMY AND SCLEROSANT INJECTION IN THE MANAGEMENT OF CHRONIC FISSURE IN ANO

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ABSTRACT **BACKGROUND:** In our institution, the first-line treatment in chronic anal fissures is the injection of a sclerosing agent under the fissure after local anesthesia. This study compares the effectiveness and side effects of sclerosant injection and internal sphincterotomy.

METHODS: 60 patients with a chronic fissure in ano were randomly divided into Group 1 (sclerosant) and Group 2 (lateral internal sphincterotomy) with 30 patients in each Group and prospectively studied and compared.

RESULTS: The mean duration of healing was comparatively longer in Group 1(5.04 weeks) than Group 2 (3.6 weeks). The patients were completely free from pain in both groups. The complication rate was low (3.3%) : 1 necrosis of the skin and 1 abscess at the site of injection. On Comparison between the two groups, did not show any difference in relief of pain (p= 0.5261) or healing of fissure (p= 0.0679).

CONCLUSION: The injection of a sclerosing agent under the fissure is performed in the practitioner's clinic. Healing rates are high; complications and recurrences are low. This therapeutic option may be a good alternative to classical treatments in case of anal fissures.

KEYWORDS : fissure-in-ano, sclerotherapy, setrol , lateral sphincterotomy.

INTRODUCTION :

- Anal fissures are considered one of the causes of severe anal pain. An anal fissure is a longitudinal tear or an ischemic ulcer in the distal area of the anal canal[1]. It is usually located posteriorly or anteriorly in the midline and extends from the level of the dentate line to the anal verge.
- The burning pain of an anal ulcer is intolerable and is always disproportionate to the severity of the physical lesion.
- It may be so severe that patients may avoid defecation for days together until it becomes inevitable. This leads to hardening of the stools, which further tear the anoderm during defecation, setting a vicious cycle[2].
- A chronic fissure, have symptoms of more than 6 weeks, is usually deeper and generally has exposed internal sphincter fibers in its base.
- Surgical techniques like lateral internal sphincterotomy[3] or manual anal dilatation, effectively heal most fissures within a few weeks but may result in impaired anal continence.
- Chemical cauterization[4] done by using Sodium tetradecyl sulfate or phenol-in-glycerine causes sclerosis, and fibrosis of ulcer, and also, this causes a reduction in pain.

AIMS AND OBJECTIVES:

- Aims to research for alternative non-surgical treatment like chemical cauterisation by sclerosants such as SETROL (Sodium tetradecyl sulfate),Phenomen(phenol+menthol +peanut oil),etc.
- To compare the effectiveness and side effects of sclerosant injection and internal sphincterotomy in the treatment of chronic fissure in ano.

MATERIALS AND METHODS:

- For a period of one year (January 2019 to December 2019), a prospective study was undertaken over the patients presenting to the General Surgical Department at Maharajah Institute of Medical Sciences, Vizianagaram.
- 60 patients with a chronic fissure in ano were randomly divided into Group 1 (sclerosant), and Group 2 (internal sphincterotomy) with 30 patients in each Group are enrolled in this study.
- Informed written consent was obtained.
- Ethical approval was obtained from the local ethical committee.

INCLUSION CRITERIA:

patients between 20 to 60 years of age of both sexes.

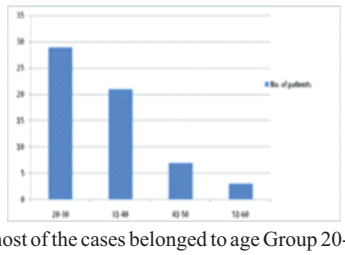
EXCLUSION CRITERIA:

- children and mentally handicapped patients
- recurrent fissures
- fissures with hemorrhoids and fistula
- fissures associated with malignancies
- fissures secondary to specific diseases like TB, Crohn's, and pregnant women.

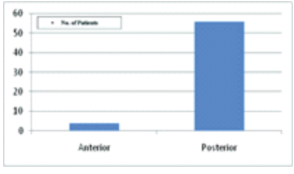
INTERVENTION:

- Patients in Group 1 were injected with sclerosant under local anesthesia
- Cases in Group 2 underwent left lateral internal sphincterotomy under spinal anesthesia.
- Cases from both Groups were asked to take mild laxatives like cremaffin five teaspoons at bedtime, high fiber diet, and to use warm sitz baths followed by diltiazem gel application.
- Cases were reviewed in Outpatient Department weekly for 6 consecutive weeks.
- At each visit, questions were asked regarding pain relief, leakage of flatus/feces, and any side effects.
- Healing was assessed visually and defined as a 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 analyzed; p-values were calculated using the Chi-Square test.

RESULTS:



In our study, most of the cases belonged to age Group 20-30 years.



The majority of the fissures were posterior in a location with sentinel pile present in 46.6% of cases.

Healing	No. of patients	Percentage
Sclerotherapy	23	88.46
Surgery	27	100

88.4% of patients in Group 1 and 100% of patients in Group 2 had completely healed fissures at the end of 4 weeks.

Pain-free	No. of patients	Percentage
Sclerotherapy	18	78.26
Surgery	23	85.18

78.26% of patients in Group 1 and 85.18% of patients in Group 2 were free from pain at the end of 3 months.

- Three patients in Group 1, whose fissures did not heal after 6 weeks and remained symptomatic, subsequently 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).
- The patients were completely free from pain in both the groups
- The complication rate was low (3.3%) : 1 necrosis of the skin and 1 abscess at the site of injection
- Comparison between Group 1 and Group 2 did not show any difference in pain relief (p= 0.5261) or fissure healing (p= 0.0679).

DISCUSSION:

- An anal fissure is usually encountered in young or middle-aged adults and is equally common in both sexes.
- It is commonly found in the posterior position, although anterior fissure is comparatively common in females
- Therapy focuses on breaking the cycle of pain, spasm, and ischemia thought to be responsible for the development of fissure in ano.
- Chemical and conservative management is now the first line of treatment .
- Healing rates of chronic anal fissure in various studies 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 effects in our study[5].
- Patients who are medically unfit for surgical procedures and spinal anesthesia can be recommended treatment with sclerotherapy .
- Though the fissure healing rate is comparatively slower, the trauma caused by surgery can be avoided, and the hospital stay is not required. Treatment works out to be very cost-effective.

CONCLUSIONS

- The injection of a sclerosing agent under the fissure is performed in the practitioner's clinic. Healing rates are high; complications and recurrences are low. This therapeutic option may be a good alternative to classical treatments in case of anal fissures.
- Surgical management should be limited to the cases of recurrence and nonresponding cases to medical management

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