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RESEARCH ARTICLE
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HEALING WITHOUT KNIFE: NON SURGICAL APPROACH FOR CHRONIC ANAL FISSURE

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ABSTRACT

OBJECTIVE: To assess the effectiveness of 0.2% glyceryl trinitrate ointment in the management of chronic anal fissure.

PATIENTS AND METHODS: A prospective study was carried out by the surgical outpatient department of MMC general hospital, peshawar from january 2023 to july 2023. Fifty consecutive patients were treated with 0.2% glyceryl trinitrate ointment and reviewed at 3 , 6 , and 12 weeks interval. Data was analysed by SPSS version 22. Mean and SD was applied for quantitative data Frequency and percentage was applied for qualitative data.

RESULT: At six weeks fissure healed in 70% of the patients. There was a remarkable improvement in the symptoms of pain, bleeding and irritation.30% of the patients had no improvement. At 3 months interval there was no recurrence with 70% healing rate.

Patients whose fissure were healed reported an improvement in bodily pain , health perception , vitality and mental health.

CONCLUSION: GTN is a useful first-line non-surgical treatment for chronic anal fissures, particularly for pain relief and promoting initial healing. However, its effectiveness may be limited by side effects and recurrence rates, so it is often considered part of a comprehensive treatment plan.

KEY WORDS: Anal fissure, glyceryl trinitrate,bleeding

INTRODUCTION

Chronic anal fissure is a common problem that cause significant morbidity. It is characterized by tear or break in the skin of anal canal mostly in the distal one third of anal canal and causes pain during defecation and for three to four hours afterwards. Majority of the fissure is acute and resolve within six to eight weeks of conservative treatment. However significant minority of fissures become chronic and remain a continuing problem for a month or even years.

Chronic anal fissures is associated with internal anal sphincter hypertonia. Reduction in hypertonia improve local blood supply encouraging fissure healing . chronic and fissure does not respond to dietary advice alone. The aim of this treatment is to alleviate sphincter hypertonia and improve blood to the fissure area.[1 ,2]

Surgical sphincterotomy is successful in healing the fissure but require an operation with associated morbidity. It is however associated with minor temporary or permanent alteration in control of flatus and occasionally stool , in upto 35% of the patients.[3]
Glyceryl trinitrate which is a most widely used topical agent matabolize to nitric oxide simulate relaxation of internal anal sphincter and reduce anal pressure.[4,]

METHODOLOGY

Fifty consecutive patients with symptomatic chronic anal fissure attending the surgical outpatient department were included in this study. Chronic anal fissure was defined on digital rectal examination where induration at the edge was visible and horizontal fibers of internal anal sphincter could be seen in the base of the lesion. The determination of chronic anal fissure was based on history more than three months and the presence of sentinel tag. A pain and a symptom score was established on a questionnaire of each patient.

Exclusion criteria:

1. Pregnant patients.
2. Inflammatory bowel disease.
3. Concomitant first and second degree hemorrhoids were not considered.
4. Associated complication like abscess, fistulas.

Prospective study was performed. A written informed consent was given by each patient. Patient was advised to apply pea size 0.2% glyceryl trinitrate ointment on finger and to apply this one centimeter inside the anal verge twice daily.
All patients were reviewed at 3, 6 and 12 weeks interval and objective changes were assessed by the inspection of anus to determine the extent of tissue healing.
The patients were scored according to the severity of the symptoms of pain, bleeding and perianal irritation at three, six and twelve week's interval. Table 1.
Patients were offered Lateral anal Sphincterotomy who did not respond to treatment.
All data was entered on SPSS version (15.0) for analysis. The descriptive variables were used to calculate frequencies and data was presented as tables and figures.

RESULTS

Out of 50 patients 40 (80%) were female, 10 (20%) male. The mean age of patients was 35 (Range 15 - 70). 38(76%) patient showed excellent response to treatment in term of symptoms. Table 2.
09 (18%) patients showed partial response.
03 (6%) patients no response.
On clinical examination of the patient 35 (70%) patients has complete healing of ulcer, the rest 15 (30%) has variable response.
In our study 10 (20%) suffered for headache but responded well to analgesic. At three months follow up 38 (76%) patients successfully treated were symptom free. No fissure recurrence.
The 09 (18%) were not compliant. 03(6%) did not responded to treatment.

TABLE 1 : GENERAL DEMOGRAPHIC DATA OF ALL CASES

TOTAL PATIENTS	50
Age	15-70 (mean 35)
Sex	(M:F) 40:10
History of pain	50(100%)
History of bleeding per rectum	36(72%)
History of irritative symptoms	42(84%)

TABLE 2: STATISTICS OF MORBIDITY AFTER TWELVE WEEKS

Pain relief	47(94%)
Bleeding per rectum	7(14%)
Itching/burning	2(4%)
Headache	10(20%)
Healing rate	35(70%)

DISCUSSION

Most patients with chronic anal fissure has increase resting anal pressure caused by hypertonicity of internal anal sphincter and this seems to play an important role in pathogenesis of anal Fissure. The aim of treatment is to decrease the anal hypertonia which may improve the anodenual bold flow and heal the fissure. In our present study 40 (80%) were females, 10 (20%) mate consented for this trial and opted for drug therapy instead of surgery. In our study by the end of the treatment 35 (70%) has completely healed ulcer. They got benefit from pea size and 02% GTN applied to the distal part of anal canal and anal verge and shared complete healing at 06 weeks therapy [5]

This is comparable with study of Thornton et al.[6], Shaukat et al [7] and Aziz et al.[8] but is more reported by Simpson et al.[9] A pea size dose of 0.2% GTN twice daily was associated with constantly lowering pain score[10,11,12] and better healing rate and is comparable to the result of shrestha et at.[13]and hussain et al.[14]

Treatment with Glyceryl trinitrate has undesirable side effects[15,16] mainly headache and is reported in different series. The headache is mainly self-limiting occurs within half an hour after application of Glyceryl trinitrate and subsides with NSAIDS[17]. In our study 10 (20%) suffered a headache ad responded well to treatment. Wald A et al.[18] has reported headache in 40% cases.

A study conducted by Fazila et aI.[19] mentioned headache in 20% cases which is comparable with our study. The patients were directed to report if any symptoms recurs that were declared disease free. Almost 70% of patients were disease free with no recurrence. This is in agreement with study by hamza sadiq et al.[20]

CONCLUSION

Digital application of topical GTN is the first line treatment of chronic anal fissure and is best choice for majority of patients with treatment course of six weeks. It's simple to apply, achieves satisfactory healing rate and is cheap, with bearable side effects.

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