



“A Comparative Study between Diltiazem 2% Gel for Local Application and Lateral Sphincterotomy for Chronic Fissure in Ano.”

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ABSTRACT

Chronic anal fissure is a persistent or recurrent painful linear ulcer located in the anal canal just below dentate line to the anal verge, failing to heal within 6-8 weeks. The standard approach involves partial lateral sphincterotomy, which reduces the internal sphincter hypertonia and anal canal pressure but may result in long term sphincter function disturbances. The present study seeks to compare the established surgical procedure with medical management using topical diltiazem in treatment of chronic anal fissure.

Materials and Methods

This prospective comparative randomized study was conducted in Great Eastern Medical School And Hospital, Srikakulam, involving 100 patients diagnosed with chronic anal fissure. Group A the study group treated with topical 2% diltiazem and group B the control group by open lateral internal sphincterotomy. Anticipated complications were observed for in patients. Discharged from the hospital on the 5th post-operative day, patients advised to review in OPD on weekly basis for a period of 1

month. Anticipated complications were observed for in patients.

Results

During the study, males were found to be commonly affected compared to females. The most common age group was 41-50yrs. Most common symptom of the patients was pain during defecation. Constipation was the major predisposing factor among all cases. Posterior midline was the most common location of fissure. Sentinel skin tag and hypertrophied anal papilla were found in almost all chronic fissure in ano patients . Anterior fissures found to more common among female patients. Patients subjected to surgical intervention by means of open partial lateral anal sphincterotomy were observed to have better relief of symptoms. Around 29% patients treated medically by 2% DTZ had no relief of symptoms after one month of treatment and discontinued medical treatment also requiring conversion to surgical intervention. Complication of Diltiazem is headache and was encountered in most of patients. Patients treated with surgery had very less complications in the post-operative period and they resolved by two weeks. Pain was the very common post-operative complication of lateral anal sphincterotomy. It was encountered by about 10% of the patients subjected to sphincterotomy surgery.

Keywords

Fissure, sphinterotomy, hypertonia, surgical procedure, anorectum.

INTRODUCTION

Anal fissure (fissure-in-ano) is a common condition affecting anorectum. It can be a very troubling condition because, if acute, the severity of pain induced patient discomfort and extent of disability far

exceeds that we would be expecting from such a trivial lesion.

Acute anal fissures frequently respond well to conservative treatment with stool softeners and proper local hygiene. Most anal fissures heal spontaneously. However, a small proportion of acute fissures do not heal and become chronic fissures (traditionally defined as symptoms lasting more than six weeks in duration). Once patients have had symptoms for this period, they usually do not respond to conservative management and have traditionally needed to be treated by surgery, which includes either a partial division of the internal (sphincterotomy) or maximal manual dilatation of the anus. Surgical treatment for this condition has been associated with the post-operative complication of incontinence in up to 30% of patients. Therefore, a non-surgical method for the treatment of chronic anal fissures is highly desirable. Among conservative

modalities, diltiazem 2% gel is rising as first line medical treatment as it breaks the vicious cycle and relaxes the sphincter tone and promote the healing of chronic anal fissures. These agents cause transient relaxation of the internal anal sphincter by blocking the calcium channels involved in muscle contraction. This treatment is sometimes termed a “chemical sphincterotomy,” and it is not accompanied by the risk of irreversible incontinence. The major side effect of diltiazem gel therapy for anal fissures is that up to 20% of patients using this treatment experience headaches. On the other hand, topical modality takes longer duration for the healing of fissure. Due to our social traditions and taboos, patients especially ladies do not readily accept the surgical treatment and ultimately suffer for a long period of time. This study

was to compare between diltiazem 2% gel and lateral sphincterotomy in treatment of chronic fissure in ano.

AIMS AND OBJECTIVES

Comparison of local Diltiazem gel (2%) over Lateral Internal anal sphincterotomy. Complications associated with medical and surgical management

MATERIALS AND METHODS

Study Design: Ahospital – based prospective randomized study

Study Sample: 100 cases

Source of Sample: Patients with chronic fissure in ano admitted to General Surgery dept. GEMS, Srikakulam.

Method: 100 Patients diagnosed chronic fissure in ano will be selected. the study employed a simple randomization technique to allocate patients into 2 groups – group A ,the study group treated with topical

diltiazem and group B ,the control group undergoing lateral anal sphincterotomy

Inclusion Criteria: all diagnosed patients of chronic fissure in ano.

Exclusion Criteria: past history of operative treatments for anal fissure.

RESULTS

AGE AND SEX DISTRIBUTION

The age and sex distribution of these 100 patients are shown in the table 1.

Out of these, 67 were male and 33 were female.

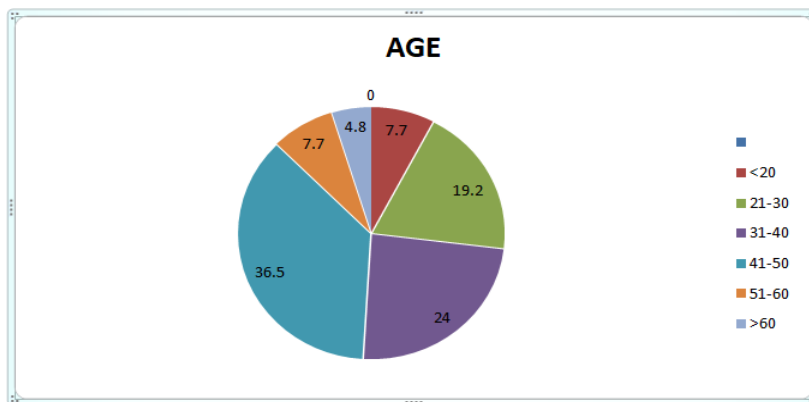
Male to female ratio is approximately 2:1.

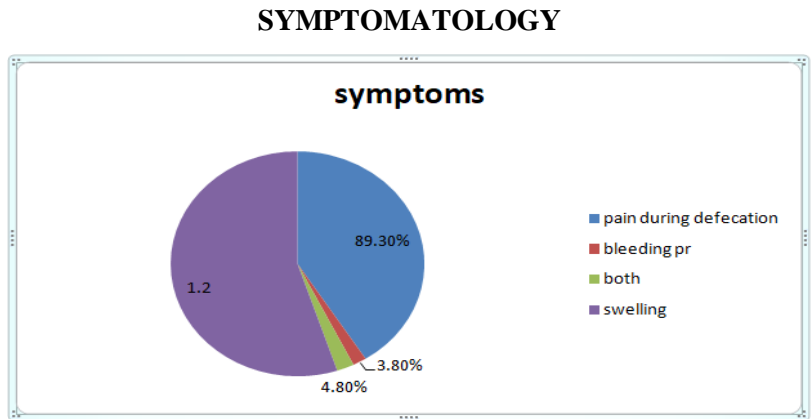
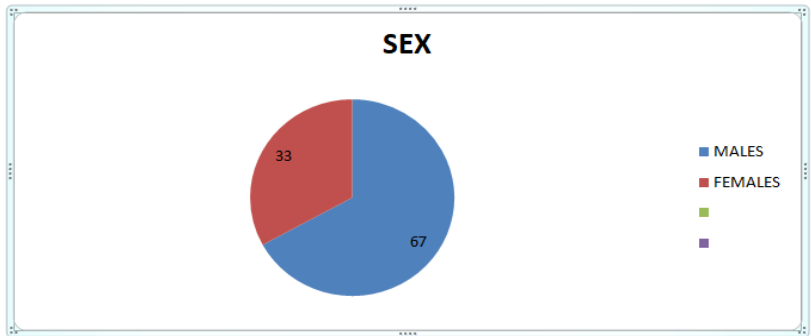
Lowest age of patients in study - 16.

Highest age of patient in study- 62 years.

The maximum numbers of patients are in the age group of 41-50 years.

Age	Males	Females	Total	%
11-20	4	2	6	7.7
21-30	14	6	20	19.2
31-40	15	10	25	24
41-50	25	10	35	36.5
51-60	5	4	9	7.7
>60	3	2	5	4.8



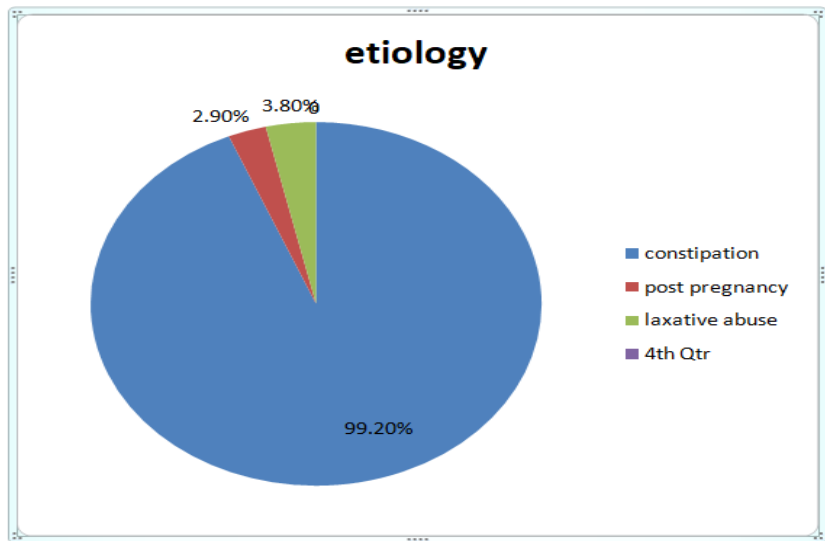


Most of the patients experienced pain during defecation and bleeding per rectum during defecation .other symptoms were swelling in perianal region and urinary retention.

Symptom	No. of cases	%
Pain during defecation	90	89.3
Bleeding per rectum	4	3.8
Both	4	4.8
Swelling	2	1.9

PREDISPOSING FACTORS AND ETIOLOGY

Constipation was found to be the major predisposing factor



LOCATION OF FISSURE

Location	Total	Male	Female
POSTERIOR	92	83	9
ANTERIOR	8	3	5

ASSOCIATED FACTORS

Chronic fissure are associated with sentinel skin tag and hypertrophied anal papilla in superior and inferior aspects of fissure.

Associated Factors	No. of Cases	Percentage
SENTINEL TAG	92	92
HYPERTROPHIED PAPILLA	8	8

MANAGEMENT MEDICAL

50 patients out of 100 were subjected to medical and conservative management. All patients were advised diet high in fibre content and proper hydration and antibiotics per orally. All patients were administered with 2% Diltiazem gel bi-daily topically after sitz bath for 4 weeks duration. All patients were followed up on for 4 weeks duration. All patients were followed up

on weekly basis in OPD for 4 weeks. Results were assessed based on the pain relief and fissure healing 36 out of 50 patients had relief of symptoms, which constitutes about 70% of patients who were managed with medical treatment. Other patients suffered from pain persistence and consequences like headache.

	No. of Patients	Male	Female	Percentage
RELIEF OF SYMPTOMS	36	26	10	70
FAILURE	14	11	3	30

COMPLICATIONS OF MEDICAL MANAGEMENT

14 of the 50 patients suffered from pain persistence and 10 patients suffered from headache as the complication of Diltiazem gel application, while few others encountered perianal itching. These 14 patients with resistant fissure needed surgical intervention due to failure of medical treatment.

SURGICAL MANAGEMENT

50 patients out of 100 were subjected to surgical treatment. All patients treated with open lateral anal sphincterotomy performed under regional anaesthesia. Duration of surgery on an average performed for about thirty minutes. 44 out of 50 patients had relief of pain and healing of fissure, which corresponds to

89.5%. Some of the patients had complications as follows.

	No .of Patients	Male	Female	Percentage
RELIEF OF SYMPTOMS	44	34	12	89.5
NO RELIEF	6	6	0	11.1

COMPLICATIONS OF SURGERY

Complications	No. of Patients
Pain	7
Seroma	2
Hematoma	1
Infection	2
Perianal abscess	1
Fistula	Nil
Incontinence	Nil

Most of the complications following surgical treatment resolved by two weeks and patient were symptom free and without any morbidity.

ANALYSIS

These patients were broadly segregated into a group of 50 each who were treated by medical and surgical methods respectively by non-randomised control study. During the study, males were found to be commonly affected compared to females. The most common age group was 41-50yrs. Fissure in ano is rare in children and old age. Most common symptom of the patients was pain during defecation. Constipation was the major predisposing factor among all cases. Posterior midline was the most common location of fissure. Sentinel skin tag and hypertrophied anal papilla were found in almost all chronic fissure in ano patients. Anterior fissures found to more common among female patients. . No patients studied suffered from inflammatory bowel disease.

Patients subjected to surgical intervention by means of open partial lateral anal sphincterotomy were observed to have better relief of symptoms.

Around 29% patients treated medically by 2% DTZ had no relief of symptoms after one month of treatment and discontinued medical treatment also requiring conversion to surgical intervention. . Complication of Diltiazem is headache and was encountered in most of patients. . Patients treated with surgery had very less complications in the post-operative period and they resolved by two weeks. . Pain was the very common post-operative complication of lateral anal sphincterotomy. It was encountered by about 10% of the patients subjected to sphincterotomy surgery.

CONCLUSION

This prospective study was performed in the Department of General Surgery, Great Eastern Medical School and Hospital. Following the study, it can be concluded that most of the acute fissure in ano heal with conservative management. Fissures that become chronic might respond to conservative management Diltiazem 2% topical gel application. Persistent fissures and symptomatic patients should be considered for lateral anal partial internal sphincterotomy. So, in chronic anal fissure 2% Diltiazem gel application can be considered as an initial line of management.

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