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Original article

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**ANALYSIS AND COMPARATIVE STUDY OF TOPICAL CONSERVATIVE
MEDICATION VERSUS OPERATIVE MANAGEMENT IN PATIENTS OF
ANAL FISSURE**

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Abstract:**Abstract:**

Introduction: Anal fissures or anal ulcers are considered one of the commonest causes of severe anal pain. Surgical techniques like manual anal(lords) dilatation or lateral internal sphincterotomy, effectively heal most fissures within a few weeks, but may result in permanently impaired anal continence. This has led to the research for alternative non-surgical treatment

AIMS AND OBJECTIVES:

The present study comprises the comparative study of 2% Diltiazem gel,0.2% Glyceryl Nitrate,2% lignocaine jelly application and need of surgical intervention in the treatment of chronic fissure in ano.

MATERIALS AND METHODS:

This is a prospective study of fissure in ano during the period from September 2020 to September 2021 in Sheth Lallubhai Gordhandas Municipal General Hospital, Ahmedabad. Clinical Data of admitted patient were collected by their detail history after stabilizing the patient, clinical examination with appropriate investigations.

OBSERVATION AND DISCUSSION:

Anal fissure is a very common problem across the world. It causes considerable morbidity and adversely affects the quality of life. Therefore appropriate treatment is mandatory.

In this study the commonest age group affected was 31-40 years age group (40%) and least affected were 51-60 years age group

The incidence of fissure in males was slightly greater than females with Male Female ratio being 2.2: 1 in our study.

CONCLUSION:

Propper clinical examination and appropriate investigations helps in management of patient either operative or non-operative which leads successful treatment in these patients. .

Key words :Fissure in ano, site of fissure, pain relief, Nitroglycerin, Diltiazem

Introduction:

With Change of life style and low fiber diets leads to many gastrointestinal related problems and particularly perianal related problems increasing with time.in all perianal problems anal fissure is markedly increasing within last few year in young generation.

Anal fissure is identified as tear or ulcer in anoderm. Which is extended up to dentate line in chronic anal fissure patients. Patient presented with burning pain while passing stool and occasional bleeding. Mucus discharge and itching also there. Sometimes it leads too so much pain that patient will not take diet because of fear of passing stool which leads to pain. Sometime in patient with chronic anal fissure sentinel skin tag found, which might be developed as a recurrent process of development of anal fissure.

Constipation is one of the commonest cause of anal fissure.in female post vaginal delivery leads to anterior anal fissure. Anal fissure mainly find in posterior region in male.

Previously anal fissure were treated by surgical manual finger dilatation (Lords).This surgery itself has sometime worst outcome which leads to stool incontinence.

Due to this outcome patients were not willing to opt for operation, so it led to alternate treatment path. With evolving time it is uttermost requirement to introduce less time consuming and feasible medication management so patient compliance can be better.

Topical medication is good option for patients with anal fissure. The present study is to check the efficacy of topical medication like 2% Lignocaine jelly,2% Diltiazem & 0.2% Glyceryl nitrate and requirement of surgical intervention in treatment of chronic anal fissure.

Aims and objectives:

1. Clinical study of the treatment of chronic fissure in ano over a period of 2 years i.e., between September 2019 to September 2021.
2. To highlight the efficacy of 2% Diltiazem Gel, 0.2% Glyceryl Nitrate and 2% Lignocaine jelly in the treatment of chronic fissure in ano.
3. Comparison of 2% Diltiazem Gel, 0.2% Glyceryl Nitrate and 2% Lignocaine jelly local application in a minimum of 45 patients in context with effectiveness, complications and side effects etc.
4. To identify the patients who required surgical intervention among these.

Inclusion Criteria :

Patients of 20 to 60 years including male and female. Both Outdoor as well as indoor patients of chronic fissure in ano included in this study.

Exclusion Criteria :

1. Children and mentally handicapped patients
2. Recurrent fissures
3. Fissures with hemorrhoids and fistula
4. Fissure associated with malignancies
5. Fissure secondary to specific diseases like Tuberculosis, Crohn's disease etc.
6. Pregnant women

Methodology

SOURCE OF DATA:

Surgical out patients and/or admitted patients of LG Hospitals attached to AMCMET Medical College, Ahmedabad with symptoms of chronic fissure in ano, over a period of 1 year i.e., between September 2020 to September 2021.

METHODS OF COLLECTION OF DATA:

Patients with symptoms of fissure in ano for more than 6 weeks will be labeled as having chronic fissure in ano and will be taken up for comparative study on randomized trial.

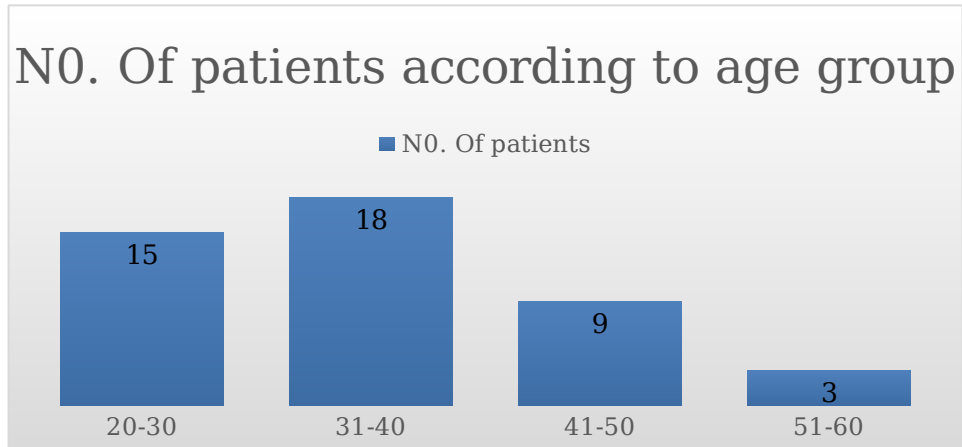
- History of the patients was noted.
- Clinical examination was done to confirm chronic fissure in ano.

Observation:

1. Age Incidence

Age in years		N0. Of patients	Percentage
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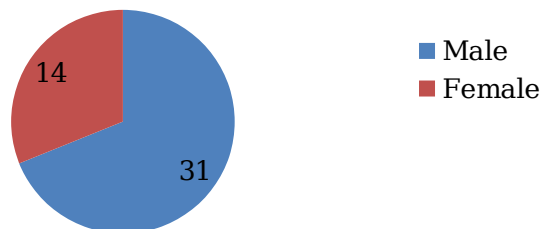
20-30	15	33.33
31-40	18	40.0
41-50	9	20.0
51-60	3	6.66



2. SEX INCIDENCE

Sex	No. of patients	Percentage
Male	31	68.88
Female	14	31.11
Total	45	100

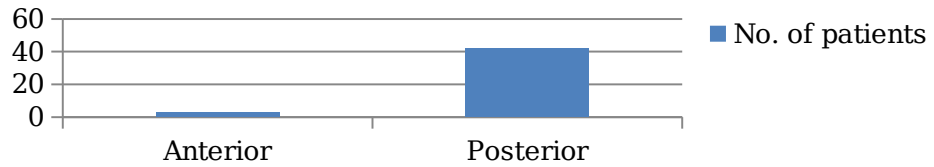
Sex of patients



3.Site of Fissure

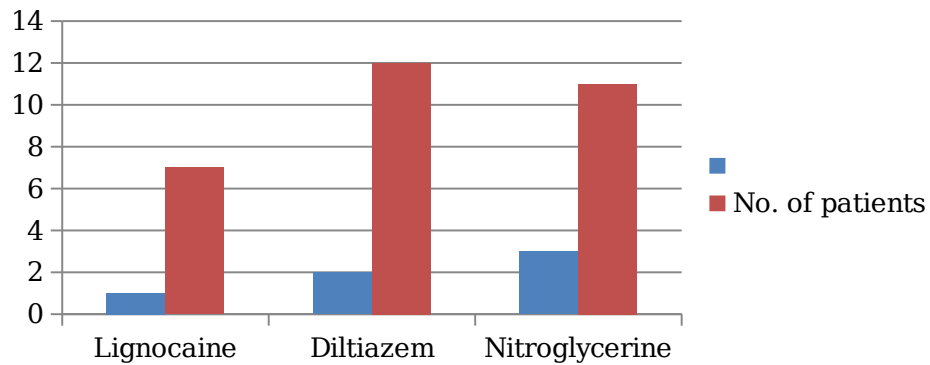
Site	No. of patients	Percentage
Anterior	3	6.66
Posterior	42	93.33
Total	45	100

Site of fissure



Healing	No. of patients	Percentage
Lignocaine	7	46.66
Diltiazem	12	80
Nitroglycerine	11	73.33

4.Healing



FOLLOW UP

A. Pain Relief

Treatment Modality	Healing out of 15	% of healing	Pain relief among Healing	% of Pain Relief among healing	Require surgery	% of require of surgery

Lignocaine	7	4	4	5	8	5
		6		7		3
		.		.		.
		6		1		3
		6		4		3
Diltiazem	1	8	9	7	3	2
	2	0		5		0
Nitroglycerine	1	7	7	6	4	2
	1	3		3		6
		.		.		.
		3		6		6
		3		3		6

B.Lost to follow up

Lost to Follow up	No. of patients
Lignocaine Jelly	1
Nitroglycerine ointment	2

Discussion:

Anal fissure is a very common problem across the world. It causes considerable morbidity and adversely affects the quality of life. Therefore appropriate treatment is mandatory.

In this study the commonest age group affected was 31-40 years age group (40%) and least affected were 51-60 years age group

The incidence of fissure in males was slightly greater than females with Male

Female ratio being 2.2: 1 in our study.

In this study posterior midline fissure (93.3%) was more common than anterior midline fissure. It has been observed that posterior fissure is more common in both sexes, although anterior fissure is comparatively more common in females

Patients receiving Lignocaine Jelly therapy underwent domiciliary treatment and were reviewed once a week on outpatient basis. Out of 15 patients undergoing treatment with Lignocaine Jelly 7 healed completely. One patient was lost to follow up.

Patients receiving Diltiazem Gel therapy underwent domiciliary treatment and were reviewed once a week on outpatient basis. Patients receiving Nitroglycerine Ointment therapy underwent domiciliary treatment and were reviewed once a week on outpatient basis. Out of 15 patients undergoing treatment with Nitroglycerine Ointment, 11 healed completely while 2 patients were lost to follow up. In Lignocaine group 4(57.14%) out of 7 patients were free from pain and 3 had slight pain on follow up after 3 months. One patient was lost to follow up. In Diltiazem group 9(75%) out of 12 patients were free from pain and 3 had slight pain on follow up after 3 months.

In Nitroglycerine group 7(63.33%) out of 11 patients were free from pain and 4 had slight pain on follow up after 3 months. Two patients were lost to follow up. In our study 7(46.66%) out of 15

patients treated with Lignocaine Jelly healed completely. .

Summary and conclusion:

In our study 12(80%) out of 12 patients treated with Diltiazem gel healed completely. In our study 11(73.33%) out of 15 patients treated with Nitroglycerine Ointment healed completely. The success rate and satisfaction of topical Diltiazem were each over two thirds. Nearly 80% of patients reported no adverse effects, and it seems that those complaints attributed to Diltiazem rarely led to reduced compliance. 8 patients in Lignocaine Jelly group, 3 patients in Diltiazem group and 4 patients in nitroglycerine group whose fissures did not heal after 8 weeks of therapy underwent surgery. Comparison between Lignocaine Jelly, Diltiazem gel, Nitroglycerine ointment therapy did not show any difference in pain relief ($P= 0.5261$), but there is difference in fissure healing ($P= 0.067$),

In our study 45 patients of chronic anal fissure were evaluated for topical medication for management and the need surgery. In the study Lignocaine, Diltiazem and Nitroglycerine topical medication were compared for effectiveness, healing and pain relief. After randomized distribution of total 45 patients with 15 in each group, the group applying topical Diltiazem was found to be more successful in healing with success rate of 80% at end of 3 months as compared to nitroglycerine and lignocaine that had success rate of 73.33% and 46.66% respectively. In patients who got completely healed, the pain relief was maximum (75%) in Diltiazem group as compared to Nitroglycerine (63.33%) and Lignocaine (57.14%).

It can thus be concluded that diltiazem should be used as a first line drug for patient with chronic anal fissure as it is superior to nitroglycerine and lignocaine in parameters like healing and pain relief.

The Limitation of this study is that it is a small sample OPD based study where patients could not be evaluated on a daily basis. Other modalities of treatment of chronic anal fissure like Botulinum injection and Nifedipine drug were not included. Surgical modalities like Lords dilatation and lateral anal sphincterotomy could not be compared in this study.

Forty Five patients of chronic fissure in ano who presented to surgery OPD and/or admitted to Surgical Ward of LG Hospital, AMC MET Medical College, Ahmedabad formed the study group in this series.

Diagnosis was made on the basis of thorough history and clinical examination.

- The commonest age group affected was 31-40 years age group (18 cases) and least affected were 51-60 years age group (3 cases).
- The incidence in males was slightly greater than females. Male : Female ratio was 2.2:1.
- Posterior midline fissure (42 cases) was more common than anterior midline fissure (3 cases).
- Eight patients in Lignocaine group, Three patients in Diltiazem gel group and Four patients in Nitroglycerine group underwent surgery because fissures did not heal even after eight weeks of topical therapy.
- Patients in all three groups did not complain of any side effects.

- 7 out of 15 patients in Lignocaine group, 12 out of 15 patients in Diltiazem group and 11 out of 15 patients in Nitroglycerine group healed completely.
- Amongst the patients who healed completely; 3, 3 and 4 patients of Lignocaine, Diltiazem and Nitroglycerine group respectively had complain of mild pain after

completion of treatment.

- One patient in Lignocaine group and Two patients in Nitroglycerine group were lost to follow up.
- Comparison between Lignocaine, Diltiazem and Nitroglycerine group show that Diltiazem is superior than the other two in terms of healing and pain relief.

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