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A Comparative Study of Different Modalities of Treatment of Anal Fissure: Glyceryl Trinitrate (Local Application) V/S Conventional Methods in the Management of Anal Fissure.

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ABSTRACT

Background: The majority of anal canal fissures heal spontaneously or withconservative treatment such as the use of anaesthetic cream to heal fissures, and high fibre diets or laxatives to reduce constipation. The aim of this study to comparative evaluation of the conventional treatment v/s 0.2% Glyceryltrinitrate ointment (local application). **Methods:** The present study included both out door and indoor patients who attended M.G. Hospital attached to Dr. S.N. Medical college, Jodhpur. Detailed history were taken and through physical examination was done. In this study 75 cases were divided in to three groups: Group I: Treated with Anal dilation under general anaesthesia, Group II : Treated with local anaesthetics, Diet, Hot Sitz bath and Group III: Topical application of 0.2% Glyceryltrinitrate. The comparison was done with respect to pre- treatment symptoms, post treatment symtoms and long term complications. **Results:** The maximum cases were seen in 30-50 years of age group and minimum was seen in below 20 years & above 60 years of age. The incidence of male patients were slightly more than females. Anorectal pain and constipation was most frequent symptoms. Streak of blood in stool was next common symptoms.By the end of 6th week with anal dilation, 80% respondent to this treatment. With local anaesthetic agent, 60% responded and 66% responded with 0.2% glyceryltrinitrate treatment modality. **Conclusion:** We concluded that GTN & local anaesthetics are both non surgical treatment modalities & thus avoids the risk & complications of surgery and anaesthesia.

Keywords: Anaesthesia, 0.2% glyceryltrinitrate, Anal fissure, lateral sphincterotomy.

INTRODUCTION

Anal fissure is linear tear in the linning of distal anal canal below the dentate line. It is common condition affecting all age group but particularly affecting young and otherwise healthy adult with equal incidence across both sex. The classical symptoms are of anal pain during or after defecation accompanied by passage of bright red blood per anus. The pain is often severe and may last for few minutes to several hours after defecation. Bleeding is in the form of streak in stool and usually modest. Symptoms from fissure causes considerable morbidity and reduction of quality of life.

The majority of anal canal fissures heal spontaneously or withconservative treatment such as the use of anaesthetic cream to heal fissures, and high fibre diets or laxatives to reduce constipation. It has been suggested that any patients with symptoms persisting more than 6 weeks has a chronic fissure. Chronic fissures are generally treated surgically using lateral sphincterotomy or anorectal stretch. A serious complication associated with lateral sphincterotomy is anal incontinence which has been noted in up to 30% of patients.[1]

Anal fissure are generally associated with raised resting anal canal pressure secondary to hyper-tonicity of internal anal sphincter and treatment is directed at reducing this. The conventional treatment are: Manual dilation, lateral sphincterotomy and local applications. The aim of this study to comparative evaluation of the conventional treatment v/s 0.2% Glyceryltrinitrate ointment (local application).

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MATERIALS AND METHODS

The present study included both out door and indoor patients who attended M.G. Hospital attached to Dr.

S.N. Medical college, Jodhpur. On patients of anal fissures admitted to various surgical wards and out door patients from June 2000 to Jan 2003. Patients were included in all age groups and either sex. Detailed history were taken and through physical examination was done. In this study 75cases were divided in to three groups:

1. Group I: Treated with Anal dilation under general anaesthesia
2. Group II :Treated with local anaesthetics, Diet, Hot Sitz bath.
3. Group III: Topical application of 0.2% Glyceryltrinitrate

Routine history was recorded in all cases which includes, the complaints with duration, under the following heads, anorectal pain, severity, relation to defaecation. Blood in stool (strak or spurt), sentinel pile, H/o constipation with duration, H/o diarrhea, H/o child birth, food habit, past history, local examination-site of fissure, anal tag, per rectal examination, proctoscopy possible or not additional findings in the form of pruritis, proctitis, internal haemorrhoids.

The comparison was done with respect to pre-treatment symptoms, post treatment symtoms and long term complications.

RESULTS

Table 1: Distribution of patients according to age & sex

Age (yrs)	Male	Female	Total
11-20 yrs	2 (4.76%)	1 (3.03%)	3 (4%)
21-30 yrs	14 (33.33%)	13 (39.39%)	27 (36%)
31-40 yrs	13 (30.95%)	12 (36.36%)	25 (33.33%)
41-50 yrs	10 (23.80%)	7 (21.21%)	17 (22.66%)
51-60 yrs	1 (2.38%)	0 (0%)	1 (1.33%)
61-70 yrs	2 (4.76%)	0 (0%)	2 (2.66%)
Total	42 (56%)	33 (44%)	75 (100%)

Table 2: Distribution of patients according to presenting complain

Presenting complaints	No. of patients
Anorectal Pain	25
Blood in stool	23
Sentinel pile	6
Anal tag	1
Constipation	25

Table 3: Various complications of different treatment modalities.

Complications	Treatment modalities		
	Anal dilation	Local anaesthetics	0.2% Glyceryltrinitrate
Allergic reaction	0 (0%)	2 (8%)	0 (0%)
Dermatitis	0 (0%)	2 (8%)	0 (0%)
Pruritis	0 (0%)	0 (0%)	1 (4%)
Anal incontinence	4 (16%)	0 (0%)	0 (0%)
Headache	0 (0%)	0 (0%)	2 (8%)

The maximum cases were seen in 30-50 years of age group and minimum was seen in below 20 years & above 60 years of age. The incidence of male patients were slightly more than females [Table 1]. Anorectal pain and constipation was most frequent symptoms. Streak of blood in stool was next common symptoms [Table 2].

The incidence of complications like allergic reaction and dermatitis were present with local anaesthetic agent in 4 patients (16%), temporarily anal continence for flatus and stool were present with anal dilation in 4 patients (16%) and transient headache were present with topical application of 0.2% glyceryltrinitrate in 2 patients (8%) in our study [Table 3].

By the end of 6th week with anal dilation, 80% respondent to this treatment. With local anaesthetic agent, 60% responded and 66% responded with 0.2% glyceryltrinitrate treatment modality.

Table 4: Follow up study of cases with different treatment modalities.

Follow up at 6 week and result outcome	Treatment modalities		
	Anal dilation	Local anaesthetics	0.2% Glyceryltrinitrate
Responder	20	15	16
Non-responder	5	10	9

DISCUSSION

Our study observed that majority of patients were between 30-50 years of age group. Similar age incidence was reported by Gorfine et al (1995),[2] Lund et al (1996),[3] Watsons et al (1996),[4] Lund and Scholefield (1997),[5] Tarnoff et al (1997),[6] Richard et al (2000),[7] Evans J et al (2001) & Skinner et al (2001).[8,9] These observations shows that anal fissures are predominantly a problem of younger age group.

It was found that anal fissures were present with equal incidence in both the sex. Similar incidence were reported by the Martin JD (1953) & Jensen SL (1988).[10,11] Almost 100% of patients had anorectal pain during and after the defaecation for few minutes to few hours. It was due to the spasm of anal sphincter and passage of hard stool. Similar incidence was reported by Lund et al (1996) & Lund and Scholefield (1997).[3,5]

All patients had blood in stool in the form of streak and 30% had pruritis as associated complaint. Few patient had anal tag and internal haemorrhoids. Similar study was reported by Sailer M (1998).[12]

Constipation is considered an aggrevating and also a causative factor of anal fissures. The patient in order to avoid pain, tends to become constipated. Our study suggested with Jensen SL (1998),[11] Sailer M (1998) reported that 88% patients had constipation with anal fissures.[12]

Anal incontinence for flatus & stool was prominent complication present in 16% of cases of patients treated with anal dilation. Watson et al (1996)

reported 14.2% incidence of mild headache,[4] which are consisted with our study in group III. In the present study the cure rate of 0.2% GTN is 66% which is comparable to other treatment modalities and pain is relieved after 20 minutes of application.

CONCLUSION

We concluded that GTN & local anaesthetics are both non surgical treatment modalities & thus avoids the risk & complications of surgery and anaesthesia.Thus GTN seems to be a better treatment option as compared to local anaesthetic and anal dilatation.

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