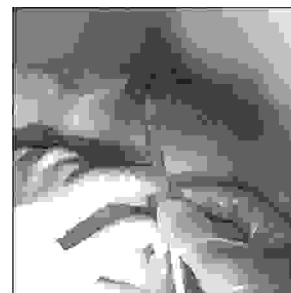


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CHRONIC ANAL FISSURE; ROLE OF CHEMICAL SPHINCTEROTOMY

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ABSTRACT... Objective: To evaluate the role of chemical sphincterotomy in the treatment of chronic anal fissure. To compare the effects of xylocaine gelly 5% with GTN 0.2%. **Design:** Comparative study. **Setting:** Outdoor and Emergency Department of Surgical unit II and III of Sir Ganga Ram Hospital Lahore **Period** During the year 2004 **Methods and materials:** 40 patients of chronic anal fissure were included in study and was divided in a randomized manner into two groups and the effects, out come and side effects of the Xylocaine 5% and GTN 0.2% were noted, while treating the patients of chronic anal fissure. **Results:** At 4 weeks only 2 patients of Group A (xylocaine 5%) showed healing evidence while 8 patients of Group B (GTN 0.2%) had shown the healing of the anal fissure. At the end of the 6 weeks a total of 4 patients of Group A showed healing while in case of Group B 14 patients had shown the healing of the anal fissure. **Conclusion:** Our study suggests that topical GTN produces successful chemical sphincterotomy. It not only helps in relieving pain but also promotes healing of fissure. Lignocaine may help in relieving pain but it is not effective in healing of fissure.

Key words: Chemical Sphincterotomy, Chronic Anal Fissure, GTN (Glyceryl Trinitrate), Xylocaine gelly 5%.

INTRODUCTION

Anal fissure is a linear tear in the skin of the anus. Most anal fissure occurs when a large, hard stool over stretches the anal opening and tears the delicate skin. Less often anal fissure also develops following prolonged diarrhoea, inflammatory bowel disease and sexually transmitted disease. This painful tear is often seen in young females during the post delivery. Anal fissure is declared chronic once it persisted for more than six weeks. Chronic anal fissure extend deeper through the

skin and are characterized by inflamed indurated margins and a base consisting of either scar tissue or the lower boarder of the internal sphincter. Chronic anal fissure do not heal without intervention. Chronicity of anal fissure is related primarily to over activity and hypertonia of internal anal sphincter muscle. General measures of treatment include increased fibre intake, increased fluids intake, sitz bath and topical analgesics. The specific treatment involves the surgical methods like sphincterotomy and anal dilation. Both these surgical procedures aims to

overcome sphincteric hypertonia and are associated with unpredictable and unacceptable adverse effects related to the faecal continence¹.

Now-a-days chemical sphincterotomy is the first line of treatment. The common drugs used for the conservative management of fissure are GTN paste, Lignocaine gelly, local Nefidipine. We decided to contemplate a randomized, prospective study using topical nitrates which provide nitric oxide that is an important neurotransmitter in nerve related relaxation and xylocaine gelly which anaesthetized local area and thus relieving the pain and spasm of the internal anal sphincter, and observe the effects of this chemical sphincterotomy on our patients of anal fissure.

OBJECTIVES

The main objective of this study was to observe and compare the effect of chemical sphincterotomy by topical application of the Xylocaine gelly 5% and GTN 0.2% ointment for the treatment of chronic anal fissure in young female. Forty patients were studied in this study by divided them into two groups in a randomized manner and the over all response, outcome and side effects were noted in both groups. Our study shows the GTN ointment was superior then xylocaine gelly for the conservative management of chronic anal fissure.

MATERIAL AND METHODS

Forty female patients of age ranging between 20 to 45 years, with chronic anal fissure presenting to the outdoor and emergency department of Surgical unit II and Surgical unit III of Sir Ganga Ram Hospital in the year 2004 were included in the study. Chronicity was defined as symptoms (painful defecation and bleeding per rectum) lasting more than one month, induration of the fissure, fibres of sphincter muscle visible at the base of fissure or presence of sentinel pile.

Patients suffering from diabetes mellitus, jaundice, were excluded from the study. Pregnant female were also excluded from the study.

Patients were randomized into two groups of 20 patients each, group A and group B. It was ensured that both

groups were comparable for age, weight and duration of symptoms. Both groups were allocated to different topical treatment but same general measures, like increased fibre intake, increased fluids intake and sitz bath.

Group A received 5% Xylocaine gelly, while Group B received GTN ointment at 12 hourly interval (twice a day). Both groups were followed up at 2 weeks interval for 6 weeks for the relief of pain, healing of fissure and the side effects of the Drugs.

Pain relief was defined as complete absence of pain, healing of fissure was defined as completely healed fissure with full epithelialization. Side effects like headache, local rashes and itches were noted.

RESULTS

Two groups were comparable in age, weight and duration of symptoms.

Table-I. Distribution of patients according to Age, Weight and the duration of the symptoms.

Parameters	Groups A	Mean	Group B	Mean
Age (year)	20 - 43	31.5	20 -45	32.5
Weight (Kg)	40 - 71	55.5	40 -75	57.5
Duration of symptoms (wks)	6 - 18	12	6 -20	13

Table-II. Pain relief at different interval of duration of Management

Pain relief at	Group A (Xylocaine, n=20)	%age	Group B (GTN, n=20)	%age
2wks	4	20	9	45
4wks	2	30	2	55
6wks	2	40	3	70

After two weeks of treatment 9 out of 20 patients in Group B (GTN) had complete pain relief while only 4 in Group A (Xylocaine) had pain relief. Even after 4 and 6 weeks of interval more patients in Group B had pain relief

than Group A, as shown in the table-II.

No patient in any of the group had healing of the fissure after two weeks of the treatment as shown in Table-III.

Healing of fissure	Group A	%age	Group B	%age
2wks	0	0	0	0
4wks	2	10	8	40
6wks	2	10	6	30

At 4 weeks only 2 patients of Group A showed healing evidence while 8 patients of Group B had shown the healing of the anal fissure. At the end of the 6 weeks a total of 4 patients of Group A showed healing while in case of Group B 14 patients had shown the healing of the anal fissure.

After the first two weeks 3 patients of Group B had headache which subsided by using simple panadol and these patients continued the treatment, while only one patient of Group A had pruritis ani, as shown in table-IV.

Nature of side effects	Group A	Group B
Pruritis ani	1	0
Headache	0	3
Sensitization of anal skin	0	0

DISCUSSION

In the treatment of anal fissure, stool softeners; warm sitz bath, local anaesthetics agents have been used in various combinations.¹ However the main stay of the treatment for the chronic anal fissure has been Surgery. Surgical procedures comprises of internal sphincterotomy and anal dilatation.

Anal dilation in the anus is manually stretched under

anaesthetics up to about 4 fingers is attractive because of its simplicity but the technique is difficult to standardized and produces an uncontrolled tear of the sphincter. This procedure may be associated with bleeding, perianal bruising, faecal incontinence and full thickness rectal prolapse.

Sphincterotomy on the other hand is a more controlled and standardized procedure but in the hands of novice can lead to partial or complete faecal incontinence or on times may inadequately done and thus fail to relief symptoms.

Nitric oxide is an important inhibitory neurotransmitter on the internal anal sphincter. Reversible chemical sphincterotomy may be achieved by anal application of an ointment containing glyceryl trinitrate (nitric oxide donor). GTN has been reputed to heal anal fissure by doing sphincter relaxation and improving anodermal flow^{2,3,4,5}.

Our study shows a success rate of 70% while many studies have shown success rate exceeding 80%^{6,7,8}.

In our study complete pain relief occurred much earlier and in more patients with nitroglycerine ointment than with xylocaine. However a large multicenter, randomized, controlled trial on 132 patients failed to demonstrate any superiority of GTN over the placebo in healing rates and pain scores, although beneficial effects of GTN on anodermal blood flow and sphincter pressure were confirmed⁹.

Two studies carried out by Schouter W R et al and Tander B et al, in which they compared GTN with xylocaine, also showed pain relief was superior with GTN^{10,11}.

Healing of fissure after 6 weeks was also superior with GTN as compare to xylocaine gelly.

In contrast with other studies headache was not a significant problem with GTN ointment.

CONCLUSION

Our study suggests that topical GTN produces successful chemical sphincterotomy. It not only helps in relieving pain but also promotes healing of fissure. Lignocaine may help in relieving pain but it is not effective in healing of fissure. Also GTN is not associated with any specific complication as compare to surgical procedures, which may be associated with dreadful complications like faecal incontinence. Thus GTN should be considered as the 1st line of treatment in patients of chronic anal fissure.

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