Original Article

Effect of Topical Glyceryl Trinitrate on the Management of Acute Anal Fissure


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ABSTRACT

Objectives: To find out the effect of topical glyceryl trinitrate on the symptoms and signs of acute anal fissure.

Patients And Methods: Seventy-five patients were treated with 0.2% topical glyceryl trinitrate twice daily as local application in the anal canal with the help of cotton pledget, which was soaked in the ointment for four weeks and their symptomatology, and healing of anal fissure was assessed weekly. The study was carried out at a surgical unit of Combined Military Hospital Rawalpindi for six months from June 2004 to December 2004.

Results: Out of 75 patients, 42 had complete healing of anal fissure while six had partial healing. Thus the healing rate was 64% observed in our study.

Conclusion: 0.2% Glyceryl trinitrate ointment is an effective way of treating acute anal fissure. (Rawal Med J 2006;31:70-72)

Keywords: Anal fissure, treatment, glyceryl trinitrate.
INTRODUCTION

Anal fissure is a painful linear tear situated in the anal canal extending from just below the dentate line to the anal verge. It was first recognized as a disease in 1934. It is a common condition affecting all age groups but is particularly seen in young and healthy adults with equal incidence across the sexes.¹ The initiating factors in anal fissure are unclear although anal trauma caused by passage of a hard stool has been suggested. Other causes include incorrectly performed operation for hemorrhoids, tuberculosis, crohn’s disease and sexually transmitted diseases. The main underlying pathology however, appears to be a high resting anal pressure caused by increased sphincter tone.²⁻⁴ The classical symptoms of anal fissure are of anal pain during and after defecation accompanied by the passage of bright red blood per anus. In addition, pruritis may be present.⁵

The underlying principle of treating anal fissure is to reduce the internal anal sphincter tone. The treatment with forced anal dilatation is associated with an unacceptable level of incontinence.⁶ The surgical procedure of choice now is a lateral sphincterotomy, which involves dividing the internal sphincter at one point on the lateral wall of the anal canal up to the level of dentate line. It is successful in about 95% of cases but patient should be warned that it can be associated with minor degrees of incontinence to flatus or mucus.⁷ The use of 0.2% glycercyl trinitrate cream applied two or three times a day can lead to healing of fissure in about 50% of cases.⁸⁻⁹ This treatment avoids all the complications related to surgical procedures and it can be carried out as an outpatient. It is cost effective, does not require hospitalization and no time is lost from work. The aim of this study was to find the results of application of 0.2% Glyceryl trinitrate (GTN) on acute anal fissure.
PATIENTS AND METHODS

A total of seventy-five adult patients with acute anal fissure from the surgical outpatient department of Combined Military Hospital (CMH) Rawalpindi were included in the study. Patients with chronic anal fissure, having any other associated pathology, recurrent cases, and past history of any surgery of anal canal were excluded. The diagnosis was based on history and physical examination including digital rectal examination and proctoscopic examination.

All the patients were treated with 0.2% topical glyceryl trinitrate. It was prescribed twice daily for local application in the anal canal with the help of cotton pledget, which was soaked in the ointment. The duration of treatment was four weeks and symptomatology and healing of anal fissure was assessed at weekly intervals. 0.2% glyceryl trinitrate was prepared in the pharmacy of CMH Rawalpindi by mixing tablets of angised and lignocaine gel in appropriate concentration by a trained pharmacist.

RESULTS

The age of patients varied between 21-54 years with mean age of 31 and median age of 34 years. Out of 75, Sixty-eight (90.66%) patients were male, while 7 (9.34%) were female. In 66 (88%), the fissure was located posterior, 5 (6.66%) had anterior fissure while 4 patients (5.33%) were having both anterior and posterior fissure (figure 1). Out of 75 patients, 42 had complete healing of anal fissure while 6 patients recovered partially and 27 patients did not show any response. Thus the healing rate was 64% (figure 2).

Figure 1. The anatomical locations of anal fissure in study population.
Acute anal fissure is one of the most common ailments in proctology which causes a lot of discomfort, social embarrassment, loss of work hours and progress to chronic anal fissure if not managed properly. Bacher et al conducted a randomized trial of 0.2% GTN Vs 2% lignocaine gel, each applied 3 times daily in a mixed group of acute and chronic fissure patients. After one month, healing rate was higher with GTN in both the acute (91.6% GTN Vs 50% Lignocaine) and chronic (62.5% GTN Vs 20% lignocaine) fissure groups.

A study from Lahore, showed an overall healing rate of acute and chronic anal fissures with 0.2% GTN to be 66.66% and 63.15% respectively, while healing rate in our study was 64% in acute anal fissure. A study from UK in 2001 concluded that chemical sphinterotomy had the advantage over surgical treatment of avoiding long term complication (notably incontinence) and not requiring hospitalization and same was our
observation. A wide variation in the results has been reported in the literature, ranging from 62% to 91%. This is because of the difference in the duration of treatment and concentration of topical GTN. In conclusion, 0.2% GTN ointment is an effective way of treating acute anal fissure and it can be more acceptable way of treatment for the patients.

REFERENCES