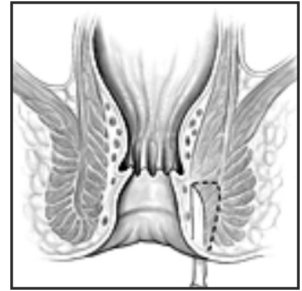


ORIGINAL

PROF-913

# ANAL FISSURE



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**ABSTRACT...** [mukarram1066@hotmail.com](mailto:mukarram1066@hotmail.com), [drishtiaqaziz@hotmail.com](mailto:drishtiaqaziz@hotmail.com). **Objectives:** To compare role of topical glycerol trinitrate Ointment with lateral internal sphincterotomy. **Setting:** Department of Surgery CMH Kohat & PAF Hospital Karachi. **Period:** From Mar 2003 to August 2004. **Patients & Methods:** Sixty patients suffering from chronic anal fissure were selected and equally divided into two groups. Group A was managed by topical glycerol trinitrate (GTN) ointment and group B was treated by internal sphincterotomy. Patients were followed up in the out-patient department fortnightly. **Results:** Eight weeks after treatment, 66.6% patients in group A and 86.5% patients in group B had healed fissures. Complications seen in group A were headache 9(30%), anal horny sensation 4(13.3%) and perianal soiling 2(6.7%) patients. In group B complications included infection 2(6.7%), soiling of under clothes 5(16.7%) and flatus incontinence 4(13.2%) patients. **Conclusions:** Although topical GTN ointment is non-invasive therapy with no permanent complications, it achieves low healing rates as compared to lateral internal sphincterotomy.

**Key Words:** Glyceryl Trinitrate, Internal Sphincterotomy, Chronic Anal Fissure

## INTRODUCTION

Anal fissure can be described as a split in the anoderm, just distal to the dentate line. The exact cause of anal fissure is not known but current evidence suggests high sphincter pressure and secondary local ischemia as causative factors<sup>1</sup>. The diagnosis is made typically by a history of pain and bleeding accompanying defecation and is confirmed by visual inspection<sup>2</sup>. Fissure can be acute or chronic. Acute fissures are superficial and show well-defined margins with little induration, if any. With chronicity the edges become raised and there is the

classic triad of a sentinel tag, anal ulcer and hypertrophic anal papilla<sup>3</sup>. Though the distinction between acute and chronic fissure is somewhat arbitrary, fissures failing to heal within 06 weeks despite conservative measures are designated as chronic<sup>4</sup>.

Different modalities employed for anal fissure management include conservative measures, surgical procedures and various pharmacological agents<sup>1</sup>. Lateral internal sphincterotomy is an effective treatment but sometimes results in permanent alterations in

continence. However topical GTN ointment is a relatively newer modality. It is considered as an effective treatment option with no permanent side effects<sup>5</sup>.

## MATERIAL AND METHODS

This study was conducted at the departments of Surgery in Combined Military Hospital Kohat and P.A.F Hospital Karachi, from March 2003 to August 2004. Sixty cases suffering from the disease were selected by non-probability convenient sampling. Thirty cases were managed by employing each of the selected procedures. All patients, primarily diagnosed in OPD, having symptoms of fissure-in-ano of more than six weeks' duration, were included. Patients with recurrent disease or having associated fistula-in-ano or other anorectal pathologies were not included in the study.

Group A cases were managed by topical GTN ointment (0.2%) applied three times daily. It was prepared by a qualified pharmacist using white soft paraffin. Treatment was continued for up to 08 weeks and patients were reviewed fortnightly in the OPD. Patients in group B were treated by lateral internal sphincterotomy. The procedure was performed under general Anaesthesia and open technique was used. Patients were advised oral antibiotics, analgesics and daily Sitz baths for 5 days postoperatively.

## RESULTS

Patients selected in this study ranged from 17-61 years of ages with a mean age of 40.1 years in group A and 39.3 year in group B. Peak incidence was noted in the 4<sup>th</sup> decade (16 patients). Patients included in study exhibited a variety of symptoms including painful defecation 86.58%, bleeding 39.36%, constipation 39.96%, swelling perianal region 33.33%, pruritus ani 46.62% and perianal discharge 23.31%. On physical examination sentinel pile was seen in 82.25% cases and all had posterior anal fissure.

At eight weeks, evaluation by proctoscopic examination revealed that 66.6% patients in group A and 86.5% cases in group B had healed fissures. This difference in outcome was analyzed by using chi square test ( $p =$

0.003). Group A patients suffered adverse effects like headache (6.6%), sensation of mild anal burning (13.2%) and complaint of perianal soiling (6.6%) after topical use of 0.2% GTN. Patients in group B had wound infection (6.6%), postoperative perianal soiling of under clothes (13.2%) and flatus incontinence (13.2%).

Figure 1: Complications in Group A (N=30)

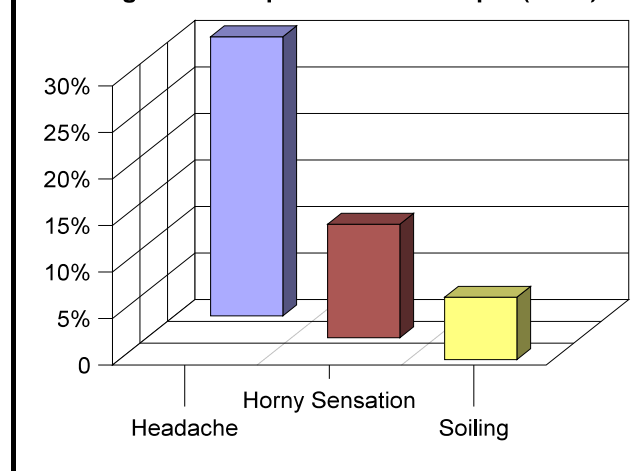
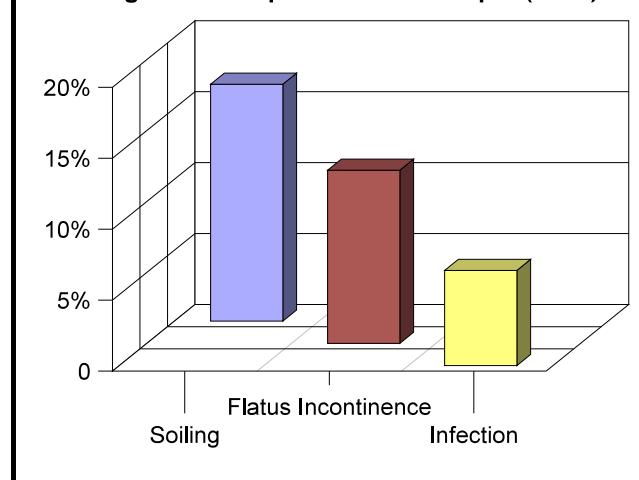


Figure 2: Complications in Group B (n=30)



## DISCUSSION

Anal fissure is one of the common anorectal disorders which causes significant adverse effects on the quality of life of the sufferers<sup>6</sup>. Most patients with fissure-in-ano present in acute stage and there is spontaneous healing with simple conservative measures and the illness

proves to be relatively short-lived. Also, 10-30% of chronic fissures do heal with conservative measures but most will require further intervention. Many pharmacological therapies are available e.g. topical organic nitrates, calcium channel blockers and local botulinum Toxin A injection. Surgical procedures like manual anal dilatation, internal anal sphincterotomy and anoplasty have been described in the management of chronic anal fissure with varying success rates<sup>7</sup>. GTN topical application acts on the internal anal sphincter resulting in decrease in mean maximal anal resting pressure and is thus said to help facilitate the healing of fissure. Lateral internal sphincterotomy has been considered as a gold standard for treating chronic fissures. It is the most common operation performed in these patients but is described as having high incidence of faecal incontinence.

Our study confirms the results of similar studies and achieved healing rate of 66.6% with 8 weeks topical 0.2% GTN ointment. Some studies have shown faster healing rates by using higher concentration of GTN (up to 0.5%), but the frequency of adverse effects especially headache also increased. Large series report a success rate of 85% to 95% for the lateral sphincterotomy as a treatment of chronic fissure. Results derived from our study are consistent with these.

Headache is the chief side effect noticed by patients using topical GTN ointment. It is seen in 19% to 44% according to various studies, closely related to the concentration of drug. In our study 26% had moderate to severe headache, which responded to oral analgesics. Anal burning and soiling has been reported in various studies, which were also seen in our cases. The main complication of considerable concern in patients treated by lateral internal sphincterotomy is incontinence. Incontinence may be major (gross inability to control stool), partial (inability to control liquid stool) or minor (Inability to control flatus). This may be constant or intermittent and temporary or permanent. Due to wide variety of data, it is difficult to reach at a conclusion

about the exact incidence of incontinence. In our study 13.2% patients had flatus incontinence. This study, revealed that the healing rate in group A, managed by topical GTN ointment applications was low as compared to that in group B, managed by lateral internal anal sphincterotomy. Analysis by chi square test showed difference as significant ( $p=0.003$ ).

## CONCLUSION

Although lateral anal sphincterotomy was superior in terms of healing but it is an invasive procedure and is liable to cause long term complications of flatus and fecal incontinence.

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