

**Comparitive study between
surgical sphincterotomy and
topical Glyceryl trinitrate in
treatment of chronic anal fissure**

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degree in general surgery*

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Introduction

Anal fissure is a chronic condition characterized by painful defecation and rectal bleeding. (Massoud B W et al; 2005).

An anal fissure is a painful linear ulcer in the lower part of the anal canal. It is very often referred to as an ischemic ulcer. Anodermal blood flow is negatively correlated with resting pressure of the anus. Increased activity of the internal anal sphincter may decrease the anodermal blood supply by compressing arterioles. (Madalenski M ; etal; ۲۰۰۶).

Chronic anal fissure is a significant cause of morbidity. Internal sphincterotomy has long been the operative treatment of choice. Concerns remain, however, on its effects on continence. (Iswariah et al.;۲۰۰۵).

Internal sphincterotomy is widely used in the treatment of chronic anal fissure. However, it is associated with a high rate of irreversible incontinence. For this reason the botulinum toxin has become a medical means of reversible sphincterotomy. Indeed, this neurotoxin induces relaxation of the smooth internal anal sphincter lasting one to three months after one injection. (Daniel F etal; ۲۰۰۶)

Reduction of hypertonia favours fissure healing. Temporary reduction in sphincter tone can be achieved by conservative treatment. Surgical sphincterotomy achieves permanent reduction of sphincter hypertonia and is very successful at healing anal fissures, but requires an operation with associated small morbidity. (Liratzopoulos N et al.; ۲۰۰۶)

Because of the disability associated with surgery for anal fissure and the risk of incontinence, medical alternatives for surgery have been sought. Most recently, pharmacologic methods that relax the anal smooth muscle, to accomplish reversibly what occurs in surgery, have been used to obtain fissure healing. (Nelson R.; ۲۰۰۶)

Pharmacologic anal sphincter relaxants promote fissure healing; however, their effect is transient and the risk of late recurrence remains uncertain. (Lvsv J et al.; ۲۰۰۶).

Recently Topical nitroglycerin has been used as a means for avoiding surgery in patients with anal fissure. However, nitroglycerin has not been universally accepted for this application because of inconsistency of efficacy and side effects. (Torabadela L et al.; 2006)

Other topical treatments (eg, calcium channel antagonists or cholinergic agonists agents) appears to be as effective as nitroglycerin agents and do not have significant adverse effects, but little data exist about these options. (Miguel M et al.; 2003)

Aim of the work

To evaluate the efficacy and costs of chemical (topical sphincter relaxant ointment **Glyceryl trinitrate** versus internal sphincterotomy for the treatment of chronic anal fissure regarding follow and extent of improvement in presenting symptoms, side effects, complications and costs in the cases included in the study and to put indications for each modality of treatment.

Patient and method

#Selection criteria: patients with chronic anal fissure will be randomly selected regardless the age or sex. Atypical fissures associated with inflammatory bowel disease or cancer or anal infection are excluded.

#Research strategy : the study will include 40 patients divided into two groups:

Group A: 20 patients will receive surgical treatment in the form of internal sphincterotomy

Group B: 20 patients will receive medical treatment in the form of topical nitroglycerine ointment

Groups will be followed up for a period of eight weeks to assess the improvement of symptoms , healing of fissure and presence of complications.

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