

# Review: medical therapies are less effective than surgery for anal fissure

Nelson R. Non surgical therapy for anal fissure. *Cochrane Database Syst Rev* 2003;(4):CD003431.

Clinical impact ratings GP/FP/Primary care ★★★★★☆ Surgery ★★☆☆☆☆

**Q** In patients with anal fissure, what is the efficacy and associated morbidity of various medical therapies compared with surgery, other medical therapies, or placebo?

## METHODS

**Data sources:** PubMed (1966 to May 2003), Cochrane Library (May 2003, issue 2), Cochrane Colorectal Cancer Group specialised trials register (May 2003), proceedings of relevant meetings (past 3 y), reference lists of all included reports, and selected authors of published reports.

**Study selection and assessment:** randomised trials in any language that compared non-surgical therapy with surgery, an alternate medical therapy, or placebo in adults or children with chronic or acute anal fissure. Exclusion criteria: studies of atypical fissures associated with inflammatory bowel disease, cancer, or anal infection. Data were extracted on method of randomisation, blinding, intention to treat, and dropouts.

**Outcomes:** non-healing (persistence) of fissure (synonymous with persistence of anal pain) and post-treatment minor incontinence (synonymous with incontinence to flatus or anal seepage). In the main results and table of this abstract, however, the results are presented in terms of healing.

## MAIN RESULTS

32 randomised controlled trials (n = 2446) met the selection criteria. *Glyceryl trinitrate* (GTN) had higher healing rates than placebo (11 trials) (table). However, sensitivity analysis excluding 2 trials with low placebo rates found no difference between groups (table). GTN had lower healing rates than sphincterectomy (4 trials) but did not differ for minor incontinence. GTN did not differ from botulinum toxin injection (botox) (2 trials) or calcium channel blockers (CCBs) (1 trial). The addition of an *anal dilator* to normal care did not improve healing (2 trials). *Botox* did not differ from placebo (2 trials). *Botox* had lower rates of healing than sphincterectomy (1 trial) and lower rates of minor incontinence (1 trial). *Nifedipine* had higher healing rates than hydrocortisone (1 trial). *CCBs* had higher healing

rates than lignocaine (1 trial). *Lignocaine* did not differ from placebo (2 trials), but had lower healing rates than hydrocortisone (1 trial) or bran (1 trial). *Bran* did not differ from hydrocortisone (1 trial). Overall, *medical therapies* (GTN or botox) had lower healing rates than surgery (5 trials, table).

## CONCLUSIONS

In patients with chronic anal fissure, medical therapies are less effective than surgery. Some medical therapies may be marginally better than placebo.

## Commentary

Nelson provides an excellent overview of current level I evidence regarding the treatment of anal fissures. Isolated randomised controlled trials that invariably show modest improvements in healing with “newer” medical therapies<sup>1 2</sup> have prompted sudden changes in clinical practice over the past decade.

Change has been prompted by level III and level IV evidence of minor changes in incontinence with surgical intervention. The major surgical culprit, judicious anal dilatation, has fortunately been superseded by lateral internal sphincterotomy. The review by Nelson would seem to confirm the latter operation as the treatment of choice for healing of fissures, and although early incontinence does not appear to be significantly increased compared with GTN, long term data are needed to reassure surgeons as to the safety of this irreversible procedure.

Little evidence suggests the superior efficacy of alternative treatments such as Botox over GTN as a first line treatment. Meta-analytic evidence with regard to the efficacy of GTN compared with placebo is also questionable. Therefore, evidence would suggest that sphincterotomy is not an unreasonable first line treatment option for patients with anal fissure with the appropriate “informed consent” based on available level I evidence provided by this excellent review.

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- 1 Brisinda G, Maria G, Bentivoglio AR, et al. A comparison of injections of botulinum toxin and topical nitroglycerin ointment for the treatment of chronic anal fissure. *N Engl J Med* 1999;**341**:65–9.
- 2 Lund JN, Scholefield JH. A randomised, prospective, double-blind, placebo-controlled trial of glyceryl trinitrate ointment in treatment of anal fissure. *Lancet* 1997;**349**:11–4.

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Medical therapies for chronic anal fissure (outcome = healing of fissure)\*

Comparison	Weighted event rates	RBI (95% CI)	NNT (CI)
GTN v placebo	55% v 33%	78% (7 to 198)	5 (3 to 51)
GTN v placebo (excluding 2 trials with low placebo rates)	54% v 40%	35% (-15 to 115)	Not significant
		RBR (CI)	NNH (CI)
Medical therapy (GTN or botox) v surgery	50% v 86%	42% (21 to 58)	3 (3 to 5)

\*GTN = glyceryl trinitrate; RBR = relative benefit reduction. Other abbreviations defined in glossary. Weighted event rates, RBI, RBR, NNT, NNH, and CI calculated from data in article using a random effects model.