



Topical Anal Fissure Treatments – getting to the bottom of it

CLINICAL QUESTION

How effective are topical treatments (calcium channel blockers, nitrates and vitamin E) in adults with chronic anal fissures?

BOTTOM LINE

Healing rates with topical nitroglycerin are ~60% compared to 40% on placebo at 8 weeks. Topical calcium channel blockers are at least as good, with a lower risk of headache (7% versus 56%). Based on 1 randomized, controlled trial (RCT), topical vitamin E may be superior to nitroglycerins (86% versus 66% healed at 8 weeks).

EVIDENCE

- Five systematic reviews of RCTs in last 10 years.¹⁻⁵ Focusing on most recent. Adjunctive treatments usually unclear (often fiber or dietary advice). Healing mostly defined as determined on exam or patient reported.
- Calcium channel blockers (example diltiazem 2% ointment):
 - Healing (4 RCTs, 372 patients):
 - At 6 weeks, 78% versus 42% (placebo), number needed to treat (NNT)=3 (calculated by PEER).¹
 - Other systematic reviews found similar.^{2,3}
- Nitroglycerins (example nitroglycerin 0.2-0.4% ointment):

- Healing (17 RCTs, 1063 patients):
 - At 8 weeks,¹ 63% versus 38% (placebo), NNT=4.
 - Other systematic reviews found efficacy ~50% versus 35% (placebo).^{2,3}
- Calcium channel blockers versus nitroglycerins:
 - Healing (11 RCTs, 770 patients):
 - At 8 weeks, 79% versus 65% nitroglycerin.¹
 - Similar in other systematic reviews,³⁻⁵ but only statistically different in 1 review.³
 - Headache (10 RCTs, 590 patients):
 - 7% versus 56% nitroglycerin.¹
- Limitations:
 - Many systematic reviews included pediatrics, did not include all RCTs and had suboptimal statistical analysis; many RCTs unblinded and considered high risk of bias.
- Vitamin E:
 - 1 RCT, 160 patients, topical vitamin E or topical nitroglycerin twice daily.⁶ At 8 weeks:
 - Healing: 86% versus 66% nitroglycerin, NNT=5.
 - Stopping due to headache: 0 versus 18% nitroglycerin.
 - Limitations: Patients unblinded, nitroglycerin possibly underdosed, unknown IU/g of vitamin E.

CONTEXT

- Most fissures are at the midline. Other locations may indicate secondary cause (example Crohn's disease) and should be investigated.⁷
- Guidelines recommend topical calcium channel blockers or topical nitroglycerins.^{8,9}
 - Botox and surgery are options for treatment failure, but fecal incontinence possible.⁹
- Cost (~8 weeks):
 - Compounded topical calcium channel blocker/nitroglycerin: ~\$60/30g.¹⁰
 - Commercially available vitamin E ointment = ~\$10/50g.¹¹

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