

Practice Tips

Larry Reynolds, MD, MSC, CCFP

Novel uses for nitroglycerin

Nitroglycerin (NTG) remains the mainstay of treatment of angina. As a smooth muscle relaxant, it has some unique uses in other clinical situations.

Esophageal spasm

Those prone to developing severe painful esophageal spasm when swallowing certain foods can often find relief with sublingual NTG spray.¹

Biliary colic

Nitroglycerin spray (two or three 0.4-mg sprays) can abort some attacks of biliary colic,^{1,2} which might help patients awaiting surgery or elderly patients who cannot tolerate surgery.

Anal fissure

Anal sphincter muscle spasm is the primary cause of anal fissure. Nitroglycerin ointment (0.1% *not the 2% used for cardiac disease*) is probably the treatment of choice for both adults^{3,4} and children.⁵ The dilute ointment, applied sparingly twice daily until healing occurs, is very effective. Meticulous or squeamish patients can be offered clean disposable gloves from your office; advise them to cut the fingers off and use them as finger cots to apply the ointment. This might help reduce absorption through fingertips and, subsequently, headaches as a side effect.

Tocolysis

Studies have shown that NTG can work as a tocolytic, particularly for preterm birth. Stopping a prolonged contraction might be critical when it causes fetal distress or

when contractions compress a prolapsed cord. Sublingual NTG spray, usually accessible and fast-acting, might be particularly useful when traditional tocolytics cannot be given intravenously.^{6,7}

Manual removal of placenta

Nitroglycerin, which can relax the uterus, can facilitate manual removal of the placenta and might avoid need for general anesthesia provided appropriate analgesia is available. There are no trials of using NTG sublingual spray in this fashion, but it does have similar systemic effects to intravenous NTG (100 to 200 µg). It might be particularly useful when staff are unfamiliar or inexperienced in use of intravenous NTG.^{8,9}

Renal colic

Studies on use of NTG for renal colic have been done but are inconclusive to date.^{10,11}

Nitroglycerin was once used solely for relief of angina pectoris. It appears to have a wider spectrum of indications. The major complication remains headache; hypotension is a rare side effect. Patients need to be aware of these complications and be cautioned that they might need to lie down when they use it. ♦

References

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We encourage readers to share some of their practice experience: the neat little tricks that solve difficult clinical situations. *Canadian Family Physician* pays \$50 to authors upon publication of their Practice Tips. Tips can be sent by mail to Dr Tony Reid, Scientific Editor, *Canadian Family Physician*, 2630 Skymark Ave, Mississauga, ON L4W 5A4; by fax (905) 629-0893; or by e-mail tony@cfpc.ca.

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Dr Reynolds practises family medicine in London, Ont.

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