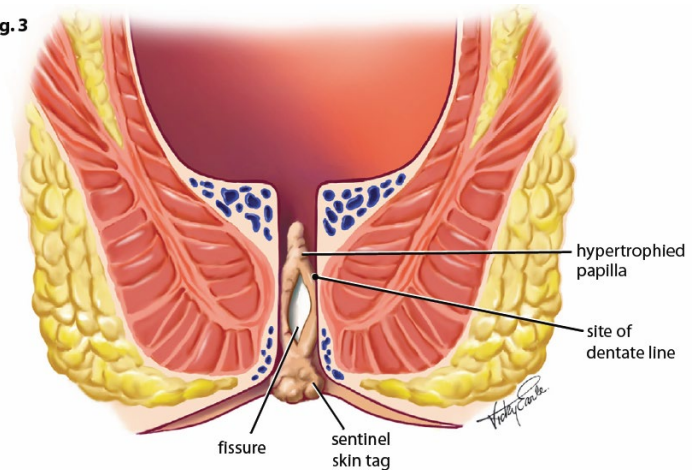


Anal fissure

This is a tear of the squamous epithelium (skin) of the anal canal (anoderm), usually 2 cm in length and involving epithelium plus often underlying muscle (figure 3). Anal fissure is caused by lack of blood supply (ischemia) due to high pressure in the anal canal. The best treatment is local application of a smooth muscle relaxant such as Nitroglycerin BID and increasing dietary fiber and you should spend no longer than 2 minutes on the toilet to have a bowel movement. The smooth muscle relaxant effect of the Nitroglycerin allows the fissure to heal by less spasm on the fissure (28% reduction for 3 to 5 hours) and increased blood flow to the scarred area due to increased vasodilation of the arterioles. The downside is that you can have transient faintness and tachycardia (fast heart beat) for a few days after starting treatment or bad headaches due to absorption of the ointment systemically from the raw surface of the fissure and these will disappear as the fissure heals. A recent fissure will heal rapidly but a chronic fissure will take at least 6 weeks. The strength returns only gradually and is about 40% at three months so continue the Nitroglycerin ointment for three months after healing twice a day. Exceptionally Nitroglycerin ointment is not

Fig. 3



tolerated and then then Diltiazem® can be used. Viagra® and Cialis® (for ED) should not be used within a day of using Nitroglycerin or Diltiazem®. The other option to be tried is Botox®, and if that fails the patient can be referred for surgery, lateral sphincterotomy (cutting part of the muscle that controls leakage from the anus) under general anesthesia being favored over anal dilation. After lateral sphincterotomy there is a 10% recurrence rate and 10% risk of some leakage of mucus or stool. Anal dilation (stretching the muscle that controls leakage form the anus under anesthesia) under anesthetic is said to have a higher failure rate and higher incontinence rate than lateral sphincterotomy.

Botox® injection

This will give prompt relief of pain to some patients with anal fissure and works by partially paralyzing the internal sphincter (control muscle of the anus) for 3 to 6 months (figure 3). Nitroglycerin ointment must be prescribed as well to permit healing. Botox® is an expensive medication which carries a small risk of mad cow disease in the distant future. Administration is by inserting a #22 needle posterior to the anus and directing this to the right postero-lateral portion of the internal sphincter, inserting the needle fully and injecting 10 units of Botox® while slowly withdrawing the needle, and then repeating with 10 units on the left. The Botox® can be kept in a fridge and this injection repeated in 2 days if no relief obtained with the first injection. We usually use 40 units total for the second injection.

Fig. 3

