CRH O'Regan®
Hemorrhoid Treatment

## 1. Topical Medications

**Nitroglycerin**: The use of a dilute compounded formulation of Nitroglycerin Ointment, such as the 0.125% NTG* formulation, has been found to be helpful in patients with anal sphincter spasm, pelvic floor spasm, in addition to anal fissures. Caution the patient to lie down when applying the ointment for the first few administrations. If they are hesitant to use their finger to administer the ointment into the anal canal, let them place a pea-sized amount of the ointment on a suppository, which serves as an applicator of sorts.

Always be certain that the patient is not taking erectile dysfunction medication, as there are stated risks associated with the use of NTG and ED meds concurrently.

**Diltiazem or Nifedipine:** These medications may also be compounded and used in lieu of the NTG. There are many different suggested "recipes" for these compounds found in the literature. We have experience with 2% Diltiazem and 0.5% Nifedipine ointments.*

*Much of the use of NTG and all of the uses of calcium channel blockers are "off-label" when used for these reasons.

These medications are your friends! One of the most frequently overlooked issues is that of a coexistent fissure in your symptomatic patients. You do not need to see a fissure to know that it exists. If the patient is tender in the midline (usually posteriorly, less likely anteriorly), within 2-3 cm of the anal verge, and if the patient does not have a fistula, an abscess, or a thrombosed external hemorrhoid, then overwhelmingly, they have a fissure!

If you feel an area of thickening, a "ridge", a "seam", or any other evidence of prior or concurrent inflammation in the midline – they likely have a fissure! Failure to address this will severely impact your "success rate" when treating these patients.

Dr. Cleator went as far as to administer NTG to virtually all of his patients, as he noticed that they experienced less pain and felt that the resultant post-banding ulcers healed a bit more quickly with its routine use*.

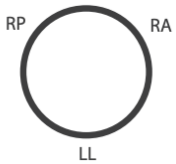
**Establish a relationship with a compounding pharmacy near you.**

Prices of compounded medications vary widely. We have found that a relationship with a compounder who provides good value for their patients is invaluable in treating anorectal patients, as many require topical medications to address all of their clinical complaints.

**2. Thrombosed external hemorrhoids:** These generally need an excision or an I&D if they present within the first 24-48 hours (some use 72 hours as the outside limit). If they have a longer history than that, then there is little need to do anything for them other than treating the patient with topical anesthetics and strongly considering using NTG, Diltiazem, or Nifedipine*. If you choose to I&D the thrombosis, we would be happy to provide you with the technique. Should you choose to send these patients out, consider referring them to a surgeon only if they can be seen within the first 24–48 hours (certainly within 72 hours) after the onset of their symptoms.

Literature has shown that more delayed surgical care of this thrombosis can generally cause the patient to take longer to fully recover than if simple conservative care is rendered.

**3. Placement of typical hemorrhoids:** Left Lateral, Right Anterior and Right Posterior. In the Left Lateral Decubitus position, that would translate to the following:




**4. Technique:**

**The "Touch Technique":**

"Blind" placement of the band: This is truly not "blind", as you have already seen the hemorrhoids if performing an anoscopic examination.

The current CRH O'Regan System includes a patented, integrated obturator that allows for a gentler insertion and which is less traumatic than its predecessor. The technology is introduced in a "neutral" direction, following the direction of the anorectum. We are not "aiming" the device towards the intended hemorrhoid until after we have inserted it to the appropriate distance.

Advance the bander a bit further in than you will ultimately need it to be, using the above technique, and then draw the Ligator back to the point where the band will be deployed, and only then "point" the Ligator towards the hemorrhoid column in question. This point can be estimated by utilizing the ridge on the outer "band pusher" sheath. If the ridge is palpated as being just inside the anal verge, then you should be in a satisfactory position, at least 2 cm "upstream" from the dentate line. The ability to sense that the tip of the bander is at the "L-angle" of the rectum will help confirm the bander's placement.

Do NOT "push" the Ligator up towards the pile in question, as if to "reach out" to the tissue, as this often makes it more difficult to obtain a satisfactory amount of tissue and tends to pass the device "deeper" than intended. Simply "aiming "the device in the correct direction will allow that tissue, which is most prominent and already abutting the Ligator, to be captured by the syringe. Let the Ligator do the work for – the more effort that you put into obtaining tissue, the less successful you will be. If you do not obtain tissue on this first positioning of the Ligator (evidenced by the syringe plunger retracting when letting go of it after aspirating or noticing some "resistance" when pulling back the plunger), do not push on the Ligator any deeper, but rather increase the angle at which you are holding the device.

**Deploying the Band:**

Before deploying the band, the outer sheath (the "band pusher") is steadied, and the inner syringe is rotated back and forth several times,

90-180 degrees. The patient is then asked whether they are feeling pressure, a "pinching" sensation, or pain. If the patient complains of a "pinch," then the patient is pinched, as after sensing this, the patient often will change their description of the sensation as "pressure".

If pinching or pain is noted, the plunger is pushed back in, releasing the grasped tissue, and the Ligator is advanced 1 cm. The above process is then repeated. If only pressure is noted, then the band can be fired; this is best done by securing the outer band pusher and slowly withdrawing the inner syringe. When properly done, the provider notices a "click" as the band is deployed, and then a suction sound as the tissue is released. This "click-smooch" almost always results in a satisfactory band being placed.

**The Post-Banding Examination:**

After deploying the band, a digital exam is performed to make certain of four things:

• You have banded a sufficient amount of tissue

• There is no muscular entrapment

• The diameter of the neck of the "polyp" that was created is fairly narrow, minimizing the size of the resultant ulcer and minimizing the chance of post-banding bleeds.

• The patient does not have pain or a "pinching" sensation.

**Manipulation of the banded pile:**

It is recommended that you manipulate the banded pile routinely after deploying the band to ensure that the banded tissue is free from muscularis. The pile should slide and move much like the skin on the dorsum of the hand, rather than like the skin on the palm of the hand. Care should also be taken to make certain that there is no entrapment of the surrounding mucosa away from the pile. A sense that the band

has a fairly narrow diameter, and that the "neck" of the pile makes the tissue feel as if it is a small pedunculated polyp, will help to minimize the risks of pain, bleeding, or other complications.

If the patient has pain after banding then a more "vigorous" manipulation is required and using the finger to "pull" the base of the banded tissue from the right, the left, and from the proximal side of the pile, as well as "pushing" the pile from below will typically free up the necessary tissue and relieve the discomfort. If the patient remains uncomfortable, the examining finger should be used to gently "roll" the band slightly. If the band was placed too "low", and near or below the dentate line, then do not try to "adjust" the band; rather, pop it off, using two fingertips if necessary.

Remember that manipulating the band may require approaching it from any point around the circumference of the band. With the patient in the Left Lateral position, a right-handed Provider will naturally work from a point anterior to the band. This may not be where the band is "pinned down". So, if this normal manipulation is not sufficient to achieve the desired goal, ensure that you work around the band 360 degrees to identify the point where the band is most effectively manipulated.

**Post-banding Evaluation**

Have your patient wait for a few minutes after banding to ensure they don't feel a "pinch". If you experience a pinching sensation, adjust the band or remove it if necessary. Otherwise, that pinch will become more severe. If the patient leaves without that "pinch", then less than 1% of your patients should experience significant pain. A 10-minute observation period is typically suitable for monitoring a patient after a banding procedure or subsequent band manipulation.

**5. Patients with minimally symptomatic (healing) fissures:** Experience has taught us that there are fissures, and then there are FISSURES. If the patient experiences perianal pain, the recommendation is to address the fissure and postpone banding until the patient is more comfortable. Most fissures will be

significantly improved within 2-3 weeks if treated appropriately, but the fissure is typically still not completely healed. For this reason, it is recommended to continue topical agents for a total of 2-3 months to allow for more complete wound healing.

When the patient becomes non-tender, if there is an indication to address their hemorrhoids, the choice is to band the most severe-looking hemorrhoid that is not adjacent to a coexisting fissure. For example, in the case of a patient with a non-tender, healing posterior fissure, we choose to address the right-posterior hemorrhoid last.

**6. Treating a single column of hemorrhoids per session will minimize complications:** Dr. Cleator's work involved patients where a single column of hemorrhoids was addressed at each visit, and his stated complication rate was roughly 1% per patient. The literature is replete with studies demonstrating a significantly higher complication rate when multiple bandings are performed at a single setting.

There is some controversy regarding this topic, as some hold that the increased number of complications is "worth" not having the additional visits for the 2 extra bandings. In our practice, we always strive to minimize complications and therefore restrict ourselves to a single column per session, barring any unusual circumstances.

**7. General Contraindications to Band Ligation.** These include, but are not limited to:

> **Pregnancy:** there has been a general consensus that pregnancy is a contraindication to banding, for fear of stimulating premature labor. There has been a fairly recent review of 45 pregnant women having RBL without a complication, but we're uncertain if this single report is sufficient to "overturn" this general concern.
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> **Portal Hypertension:** We've seen 2 reports concluding that post-banding bleeding is no more frequent in patients with portal hypertension than in those without, but the concern is that if the patient with portal hypertension bleeds, it could be catastrophic.

**Proctitis:** The concern is if the mucosa is compromised, that the post-banding ulcer may not heal appropriately, or more concerning, may fistulize, leading to the recommendation that you should be certain that there is no coexistent rectal process present that might interfere with a safe RBL.

**8. Situational Contraindications/Cautions to Band Ligation.** These include, but are not limited to:

**Latex Allergy:** Use the blue (latex-free) bands in these patients.

**Use of Erectile Dysfunction Medication:** If the patient has taken sildenafil within the past 24 hours, or tadalafil within the past 48 hours, do not use topical nitroglycerin ointment.

**Significant Pain/Tenderness on Exam:** If the patient is extremely tender to digital or anoscopic examination, the recommendation is to treat whatever is causing that pain (most commonly an anal fissure), "cool things off" for 2-3 weeks, at which time the patient can be re-evaluated. If significantly improved, and if appropriate, the consideration for RBL can be given at that later date.

**Anticoagulant Medications:** This requires a longer discussion, and a "white paper" on the topic is published on the CRH website.

**9. Identify and treat associated "non-hemorrhoidal" issues:** So often, when patients do not respond completely to their RBL, it is because there are non-hemorrhoidal issues that need to be addressed in addition to the hemorrhoids. In our experience, the most commonly missed issue is a partially healed fissure, which tends to cause symptoms more intermittently and less severely than the classic "passing razor blades" fissure presentation. Other issues include:

**Fissures:** as stated above.

**Rashes:** Most commonly treated with topical antifungals.

**Occult fistulae:** These may be partially "healed", only to later "flare up" and cause pain and later discharge. These are commonly missed when they are quiescent, and the sinus tract has "healed over".

**Bowel function abnormalities:** Constipation or diarrhea must always be addressed if an issue.

**Obviously, during initial evaluation, ruling out entities such as thrombosed external hemorrhoids, condyloma, or carcinoma is a must**.

**Topical steroids tend to be dramatically overutilized**, including in circumstances when other topicals would be preferable, and for too long in those few cases where steroids can be helpful.

**10. Take advantage of the resources offered by CRH:**

**In-office, "hands-on" training and/or "refresher" sessions.**

**"24/7" Consultative support from the CRH Medical Staff**
**Operational and both front- and back-office training and support**

**Online ordering and marketing support.**

**Please feel free to reach out with any questions that might arise – contact information for our Medical Directors is listed below.**

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* “off-label” usage. Reference: Guttenplan, Mitchel. Anorectal Topicals – White Paper. January 2015