

**Q: Which patients can/should be treated using the CRH O'Regan System?**

A: The vast majority of patients with hemorrhoidal disease are excellent candidates for the procedure. The CRH-O'Regan Disposable Hemorrhoid Banding System is suitable for virtually all patients with Grades I-III disease, as well as a lesser number of Grade IV patients.

If you reduce a Grade IV patient and convert them to a Grade II or III, they are wonderful candidates for the procedure. If this cannot be accomplished, then surgical referral is recommended.

**Q: Can you REALLY band patients with Grade III disease?**

A: Yes, you REALLY can! Other technologies suggest that Grade III patients should be taken to the operating room, and we have a wonderful track record of treating these patients with our technology. There is no question that Grade III patients are often more challenging to treat than Grade II patients, and they may require more than the usual three bandings; however, most can be successfully treated using these techniques.

**Q: How about patients with mild to moderate diseases?**

A: Other techniques are reserved only for the most severely symptomatic patients, as those treatments are often associated with significant pain and disability. The CRH O'Regan Ligator has a very low risk of these complications and is therefore perfectly suited for patients with recurrent, mildly symptomatic problems, as well as those with moderate to severe issues. Generally speaking, if the patient is sufficiently symptomatic to seek treatment and if the exam reveals that they are a good candidate for band ligation, then it is worthwhile offering these treatments.

**Q: I'm afraid that I'm not grabbing enough tissue in my band to afford the patient any relief. Is there a minimum size to the "pile" that is banded using your Ligator?**

A: The techniques that we espouse allow for an excellent clinical response without trapping a tremendous amount of tissue in the band. The banding is really not a "mini hemorrhoidectomy", as the main mechanism by which RBL is successful in treating symptomatic hemorrhoids is that it leads to an inflammatory response in the submucosa of the hemorrhoidal cushion, leading to scarring, which will cause a re-fixation of the cushion to the underlying tissues. In other words, this is much more a hemorrhoidopexy than it is a hemorrhoidectomy!

RBL (some of the older techniques) are notorious for causing post-banding pain. Post-banding pain is more common if the band is too low, or has too much tissue in it, or if you've banded too many hemorrhoids at a single setting. This is why a single column is typically treated at a session, why the bands are as "high" as they are, and why there isn't a tremendous amount of tissue typically trapped in the band.

Now, if the post-banding exam reveals that only a tiny amount of tissue is coming through the band, so that there is concern that the band will fall off before doing a satisfactory job,

that is the case when there really was too little tissue banded! The remedy is to place another band on the column and then confirm that a satisfactory band was placed.

In summary, we do not need a tremendous amount of tissue in the band, but rather enough tissue to be certain that the band will not fall off. In simpler terms, if there's more "stuff" trapped in the band than the width of the deployed band, you are generally good.

**Q: What do I do if the patient complains of pain after a band?**

A: Typically, the patient complains of a "pinching" pain when too much tissue is trapped within the band, or some excess surrounding mucosa, or tissue which is too close to the dentate line. A "transition zone" has been described that can extend 1.5 cm or so "upstream" from the dentate line. Therefore, we want to be "above" this point to ensure the patient's comfort. Trapping of the muscularis is also a possibility. Perform a digital rectal exam and manipulate the banded pile to make certain that the tuft is "standing straight up", is not tethered to any other mucosa, and moves freely (so not adherent to the muscularis). If the patient still experiences pinching pain, roll up the band by a millimeter or two. If that is not sufficient, you can gently remove the band with your finger and then reapply it a bit "higher" than your original placement.

The best way to ensure that the patient will not experience pain after RBL is to properly assess the patient before the procedure. If the patient is particularly uncomfortable with a rectal exam (and this is most commonly because of a coexistent fissure), then the fissure, or whatever else is causing the patient's pain, should be addressed, and the RBL deferred until the patient has improved. If an index finger or an anoscope causes significant pain, then RBL will cause a lot of pain. In this way, we consider both the DRE and anoscope as both diagnostic maneuvers and "stress tests" to gauge whether or not we should consider RBL in an otherwise suitable patient.

**Q: What about patient complaints after leaving the office?**

A: Minimize these by asking the patient to remain in the exam room for a few minutes after being banded. CRH recommends a minimum of 10 minutes of observation following the last intervention, particularly in patients who are "first-time" users.

If the patient only experiences a "pressure" sensation without a "pinch", then they are unlikely to have problems. If the patient complains in the first few hours, ask them to return and try to adjust the band to relieve their symptoms. Patient complaints after this are usually due to either band position (band was too "low") or pelvic floor spasm. Treatment with topical nitroglycerin or a calcium channel blocker is usually quite helpful for muscular pain, and topical lidocaine (there is a 5% lidocaine cream available OTC) will help patients with fissures, lower-lying post-banding ulcers, etc. If the patient has no contraindications, then NSAIDs and/or warm tub baths can also be helpful.

**Q: What about sepsis?**

A: Fortunately, this is a very rare complication from band ligation, because of the serious nature of the complication. There is a fair amount of controversy surrounding the pathophysiology of the entity . . . everything from hematogenous spread from a post-

banding bacteremia to local extension of the banding process (bacterial translocation or even a “mini-perf” if tissue that is too deep is included in the band).

The benefits that the CRH O'Regan System provides in minimizing these already very small risks include:

- There are no sharp-toothed instruments utilized . . . only gentle suction to grasp the tissue.
- The amount of suction generated is not great enough to readily grab tissues that are too deep for banding.
- Most importantly, the post-banding exam is performed to assure proper band placement, and if concern arises, it also allows for “adjustment” or removal of the band.

This being said, if the patient experiences fever, chills, malaise, tachycardia, pain, urinary retention, or other symptoms, sepsis must be considered. The patient should have intravenous fluids started along with broad-spectrum antibiotics and a thorough evaluation, including appropriate imaging.

**Q: My patient called after a banding and stated that they found a rubber band floating in the commode after their first bowel movement. What should I do?**

A: Reassure the patient and see him/her at their next scheduled appointment. Even though the band usually doesn't fall off until days 2–5, it will come off earlier periodically yet still achieve the desired result. It is possible that the band came off prematurely, but this should be evident at a subsequent visit.

In our own clinics, we found that this occurred at a rate of approximately 1:200 to 1:300 bandings. Initially, in our clinics, we would ask this type of patient to return for an anoscopic examination, and if appropriate, a replacement of the band. Assuming that a satisfactory post-banding exam was noted prior to discharging the patient, we found that, uniformly, some necrotic-looking tissue was present at the banding site, as would be expected if the band was noted several days later. For this reason, assuming a satisfactory band was placed, we stopped calling the patient back early and had them wait to see us at their next scheduled appointment.

**Q: How do you handle a patient with a post-band bleed?**

A: Some bleeding is very common after an RBL. The bleeding can come from a coexistent fissure, one of the non-banded hemorrhoids, and uncommonly from the banded hemorrhoid. The bleeding, if very mild, is of no concern and will likely resolve spontaneously. If it sounds as if the bleeding is a bit more concerning than that, most will respond to lying down with their feet somewhat elevated. For those who do not stop bleeding or for those with a substantial bleed, instruct the patient to come to the emergency room.

Generally, 1 of 2 issues is present in significant bleeders: either an arteriolar “pumper”, or a bleeding post-banding ulcer. GIs will most commonly clip a “pumper” and cauterize an

ulcer with any modality which is preferred, while surgeons will typically use a silver nitrate stick through a slotted anoscope for a bleeding ulcer, and a Ligator for a “pumper”.

**Q: How do you deal with patients taking anticoagulants?**

A: This is a very controversial topic, and frankly, there is little in the literature that helps us when discussing patients on the newer generation of anticoagulants. This is a much longer discussion than is suitable for this piece, so we refer to our statement on anticoagulants (INSERT LINK HERE).

**Q: I've had terrible problems using nitroglycerin in the past, and I see that you use this quite often.**

A: The vast majority of the problems associated with topical nitroglycerin utilized in perianal situations are due to either using too potent a formulation of NTG or using too much of it (or both!). We recommend using 0.125% nitroglycerin ointment\*, and using a “pea-sized” drop placed inside the anus 2 -3 times per day. In patients with fissures, treatment must be continued for at least 2-3 months after the fissure has healed to minimize the risk of recurrence. Caution should be used in patients taking ED medications.

As an alternative, calcium channel blockers such as diltiazem and nifedipine can be utilized. They are said to have a shorter half-life than NTG and should therefore be given 4 times a day.

**Q: Who should be treated with NTG/Calcium Channel Blockers?**

A: We realize that the majority of the information provided here involves the “off-label” use of these medications, but our experience teaches us that, at a minimum, the patients with the following problems can be helped using one of these compounded medications:

- Anal Fissures
- Anal Spasm
- Perianal pain
- Thrombosed Hemorrhoids (Int or Ext)
- “Double Sphincter Sign”
- Patients with incomplete evacuation symptoms
- “Tight Sphincter”

Dr. Cleator recommended using NTG on the vast majority of patients, as he also observed a more rapid healing of the post-banding ulcer and fewer complaints of pain with its use.

**Q: What do I do for a patient when the NTG/Calcium channel blocker is not effective?**

A: If 0.125% NTG\* administered as recommended is not sufficient, then the frequency or amount of the medication can be increased. If that is not effective, and if the patient is not having headaches, then you can have the patient double the amount of the compound used or advance to a 0.2% NTG\* formulation. If the patient is having headaches, then topical Nifedipine or Diltiazem can be tried.

In the event that all of the above has failed, botulinum toxin can be administered, 12.5 units into each side of the internal sphincter (this is our preferred technique – we understand that there are several suggested Botox techniques, both in dosage and administration recommendations). We have found the above technique to be quite simple, effective, and we haven't seen any significant post-injection continence issues. If this fails, then a repeat treatment with 20 units per side may be tried. This strategy results in the healing of 80-85% of patients with virtually no long-term problems (such as incontinence). If all of the above have failed, then consideration should be given to a surgical procedure (Lateral Internal Sphincterotomy).

**Q: My patient presented with a thrombosed external hemorrhoid that occurred 5 days ago. What should I do?**

A: Thrombosed external hemorrhoids can be treated conservatively, but often, if treated early on, with either an excision or an incision and evacuation, relief will be more immediate and more complete. Once more than 2-3 days have passed, then the thrombosis typically begins the “organization” process and becomes much more difficult to evacuate with a simple incision. In fact, incising these patients thromboses may well lead to a delay in their improvement.

In most circumstances, topical anesthetics and sitz baths are very helpful. Since we typically find a significant amount of hypertension within the internal anal sphincter in these patients, we've seen great benefit from the “off-label” use of NTG/Calcium Channel Blocker as well.

**Q: Can I band someone who has coexistent thrombosis or fissure?**

A: If the patient is very symptomatic from thrombosis or fissure, then treatment for the fissure or thrombosis should be instituted, and the ligation of the hemorrhoids can commence at their next clinic visit, assuming a satisfactory amount of clinical improvement. If the patient is only mildly symptomatic from either condition, then it is perfectly acceptable to begin ligations. These patients benefit tremendously by banding using the “touch technique” (without an anoscope), as the treatment is much less traumatic to the patient.

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