Rubber Band Ligation of Internal Hemorrhoids

Concept: When to Band a Hemorrhoid

Hemorrhoids, although extremely common, require treatment only when they are symptomatic. Symptoms consist of bleeding, discomfort due to protrusion, and pain generally due to thrombosis. Although painful thrombosis most often occurs in external hemorrhoids, the source of symptoms in most patients is the internal hemorrhoid. Surgical treatment for most cases of symptomatic internal hemorrhoids can be carried out in the office without anesthesia by utilizing rubber band ligation, by injecting sclerosing solution, or by applying cryosurgery. This last method, however, produces an excessive amount of drainage during the postoperative period, and because it has no compensating advantages, it is uncommonly used at the present time. If the proper guidelines are followed in the technique of rubber band ligation, this technique achieves satisfactory results over the long term in more cases than does the injection of sclerosing solution. The modern method of rubber band ligation was introduced by Barron. It involves the application of a strangulating rubber band ligature to an internal hemorrhoid, with the rubber band being placed above the mucocutaneous junction to avoid grasping sensory nerve endings. Nivatvongs and Goldberg point out that a hemorrhoid is caused by downward displacement of the anal cushion. Therefore, they advocate applying the rubber band to the redundant rectal mucosa above the hemorrhoid rather than to the hemorrhoid itself. When the banded segment of mucosa shrivels up into fibrous tissue, the hemorrhoid is eliminated. This method has the advantage of avoiding the sensitive tissues at the dentate line and thus minimizing pain. Alexander-Williams and Crapp experienced excellent results with this technique. This method is suitable for most patients with second-degree, and for many with third-degree, hemorrhoids.

When a patient’s complaints are due to the prolapse of large hemorrhoidal masses of the combined external-internal type or when the neck of an internal hemorrhoid proves to be painful if pinched by a forceps, rubber band ligation is contraindicated. For large third-degree hemorrhoids, surgical excision may be necessary. For the smaller bleeding internal hemorrhoid that seems to be supplied with nerve endings or for the patient who is extremely apprehensive, then either injection with a sclerosing solution or surgery is the preferred procedure.

Rudd encountered only two patients in 1,000 who could not be treated by rubber band ligation. These two had extremely large external hemorrhoids. Rudd claims that his patients experienced recurrence of hemorrhoids in less than 4% of cases after banding.

Indication

Symptomatic (often bleeding) internal hemorrhoids situated above the area in the anal canal that is innervated by sensory nerves
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Pitfall and Danger Point

Applying a rubber band in an area supplied by sensory nerves

Operative Strategy

In order to avoid postoperative pain, apply the rubber band to a point at least 5–6 mm above the dentate line. In some patients a margin of 5–6 mm is not sufficient to avoid pain. These patients can be identified by pinching the mucosa at the site of the proposed application of the band by using the curved Allis tissue forceps supplied with the McGivney rubber band applicator. If the patient has pain when the mucosa is pinched, apply the band at a higher level where the mucosa is not sensitive, or else abandon the rubber-banding procedure.

If the patient has severe pain after the rubber band has been applied, it is possible to remove the rubber band by using a fine-tipped forceps and a sharp pointed scissors. If the removal of the rubber band is attempted some hours after the application, the surrounding edema will often make this procedure difficult if not impossible without anesthesia and without causing bleeding.

Operative Technique

Perform sigmoidoscopy to rule out other possible sources of rectal bleeding.

With the patient in the knee-chest position, insert a fenestrated anoscope (e.g., Hinkel-James type) that permits the internal hemorrhoid to protrude into the lumen of the anoscope. Inspect the circumference of the anal canal. Try to identify the hemorrhoid that caused the bleeding. If this is not possible, identify the largest internal hemorrhoid. Insert the curved Allis tissue forceps into the anoscope and pinch the mucosa around the base of the hemorrhoid in order to identify an insensitive area. Ask the assistant to hold the anoscope in a steady position. Now inspect the McGivney rubber band applicator. Be sure that two rubber bands have been inserted into their proper position on the drum of the applicator. Ask the patient to strain. With the left hand pass the drum up to the proximal portion of the hemorrhoid. Insert the angled tissue forceps through the drum.

In grasping the rectal mucosa, be sure to grasp it along the cephalad surface of the hemorrhoid at point A, not point B, in Fig. 82–1. If this is done, then the rubber band will not encroach upon the sensitive tissue at the dentate line. Draw the mucosa into the drum, which is simultaneously pressed against the wall of the rectum (Fig. 82–2). When the McGivney applicator is in the proper position, compress the handle of the applicator. Remove the tissue forceps and the McGivney applicator from the anoscope. The result should be a round purple mass of hemorrhoid, about the size of a cherry, strangulated by the two rubber bands at its base.