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Rectal Prolapse

About the Colon and Rectum

Rectal prolapse describes the full thickness protrusion of all the layers of the rectum through the anal opening to the outside environment. Over a hundred surgeries have been described for rectal prolapse. The technical term for this is rectal intussusception. Rectal prolapse may be related to disorders of the pelvic support mechanism. The rectum, vagina, bladder, and urethra are all related to the pelvic floor and therefore it is not surprising that rectal prolapse is often associated with vaginal prolapse and other pelvic floor disorders like cystocele and rectocele.

Rectal prolapse is far more common in women (90%) and can occur at any age, though most patients are older than age 50. It was once thought that childbirth was a risk factor for pelvic floor dysmotility and weakness. However, 40% of women with rectal prolapse have never given birth.

Though patients with rectal prolapse may have a history of constipation, they also frequently (50-75%) have a history of fecal incontinence (leaking gas and stool). This may occur by 2 mechanisms: 1) the rectum constantly presents to the anal canal which, by reflex, causes the internal sphincter muscle to relax. This type of incontinence often improves after surgery. 2) injury to the nerves that serve the anal sphincter muscles. This type is often permanent and therefore often does not improve with surgery.

About 70% of patients with rectal prolapse have constipation manifest as either infrequent bowel movements or difficult evacuations. Constipation associated with rectal prolapse is poorly understood. It may be due to the rectum obstructing as it pushes its way through the anus. It may also occur because the sphincter muscles paradoxically contract rather than relax at the time of a bowel movement. Constipation can also occur as a result of surgery for rectal prolapse.

The prolapse initially occurs with straining or when evacuating the rectum but reduces spontaneously. Eventually the prolapse may require manual reduction and in more advanced cases will prolapse with activity or even standing. Patients may complain of bleeding, mucous drainage, soiling undergarments, leaking gas and stool, pain and discomfort. Women may also notice prolapse of the vagina.

At The Time Of Your Visit

When you visit your Colon and Rectal Surgeon, you will be asked several questions related to your history. A brief exam to include heart and lungs will also be performed. The examining surgeon may then place a finger into the anus and rectum to evaluate the sphincter muscles and other structures of the anus and rectum. To more fully demonstrate the prolapse, you may then be asked to sit on a toilet in the bathroom and strain thereby reproducing the prolapse. Upon completion of the exam, the possible need for further investigations or tests will be discussed as well as a full discussion of treatment options, risks, and benefits.

Investigations

1) colonoscopy

This test may be done (if not already) to make sure there are not other mechanical explanations for the presenting symptoms.

2) anal manometry

This test involves placing thin plastic catheters in the anus to measure anal sphincter pressures and to measure whether or not the rectum is soft and pliable.

Most patients do not need this test.

3) pudendal nerve motor terminal latency (PNMTL)

This test measures the function of the nerves that supply the sphincter muscle. Most patients do not need this test and the results do not always predict function after surgery.

4) video defecography

This x-ray imaging test may demonstrate the prolapse. In patients with obvious rectal prolapse on physical examination, the test may not be needed. This test may add helpful information in patients with internal rectal prolapse or associated disorders (rectocele, enterocele, sigmoidocele, vaginal prolapse).

5) colonic inertia test

Some patients have chronic constipation because the colon does not work properly. This test requires the patient to swallow a capsule that contains little rings that show up on x-rays. After ingesting the capsule, x-rays are obtained 5 and 7 days later. The distribution of the rings in the colon may give important information. 80% of the rings should pass by day 5 and 100% by day 7. If the rings do not pass and are distributed evenly throughout the colon, the patient may require removal of the colon at the same time as repair of the prolapse.



Treatment Options

Though fiber supplements are advised, it would be unusual for options other than surgery to resolve the symptoms of full thickness external rectal prolapse. Because conservative management typically does not resolve the problem, and because patients are significantly debilitated by the prolapse, and because of advances in anesthetic techniques, the vast majority of patients elect to proceed with surgery.

1) Perineal Repairs

These operative options include repairing the prolapse through the anal opening. That is, they do not require an abdominal incision. The most common procedure, the perineal rectosigmoidectomy, involves removing the rectum and excess colon and then bringing down the open end of the remaining colon and sewing it to the lowermost rectum. Recurrent prolapse is reported to occur in 0-44% of patients after this operation. Many authors believe that the recurrence rate is higher than after procedures through the abdomen. In addition, the rate of leaking gas and stool after this operation may be higher than operations through the abdomen. Not all authors agree, however, and some feel the rates of leaking gas and stool are the same. Unlike the abdominal approach, the rectum is removed during the perineal approach. The rectum stores stool better than the colon above and so, theoretically, this could negatively impact continence (leakage of gas and stool). Otherwise, complication rates for perineal procedures are low with bleeding, suture line leaks causing sepsis, and narrowing of the rectum occurring in less than 12% of patients. Generally, perineal repairs are best suited for elderly patients with significant medical problems and in those whose prolapse is strangulated or gangrenous (rare).

A) DeLorme Procedure

This technique involves the removal of the lining of the rectum with preservation of the underlying rectal muscle. The muscle is then plicated like an accordion thereby obliterating the prolapse. This procedure is generally reserved for patients with internal rectal prolapse and in selected cases of recurrent rectal prolapse.

B) Altemeier Procedure

During this operation, the prolapse is exteriorized as far as possible. The rectum and redundant sigmoid colon is then removed through the anus. The colon above the resected portion is then sewn to the lowermost rectum. There is no abdominal incision and so recovery time is shorter. This procedure is generally indicated in high risk patients with full thickness rectal prolapse.

Risks

- 1) bleeding
- 2) infection
- 3) anastomotic leak (may cause sepsis and need for colostomy)
- 4) anastomotic stricture (narrowing)
 - a. may result in constipation (unusual)
 - b. may require dilation through scope to repair
 - c. may require operation to repair
- 5) injury to bowel and blood vessels
- 6) increased bowel movement frequency
- 7) bowel movement or gas leakage
- 8) bowel movement urgency
- 9) sexual dysfunction
- 10) cardiac (heart attack, rhythm disturbances, etc.)
- 11) lung (failure, need for ventilator)

- 12) blood clots in legs
- 13) blood clots in legs going to lungs
- 14) death (0-5%)
- 15) other

2) Abdominal Repairs

There are several options through the abdomen, all with advantages and disadvantages. Most involve dissecting the rectum from surrounding structures and suspending it from the top of the pelvis where it belongs, thereby keeping it from prolapsing (protruding) downward through the anus. In patients who have a history of constipation, a concomitant resection of the sigmoid colon may be performed.

Most authors believe that recurrent prolapse and leaking gas and stool occur less frequently after the abdominal approach than after the perineal approach. Generally, abdominal repairs are best suited for those patients who are acceptable operative and anesthetic risks.

Risks

- 1) bleeding
- 2) infection (wound 20%, abdomen <5%, other)
- 3) anastomotic leak (may cause sepsis and need for colostomy)
 - a. may require antibiotics, longer hospitalization, drainage with CT scan guidance, or another surgery to resolve
 - b. may require temporary or permanent colostomy or ileostomy
 - c. may result in death from sepsis
- 4) abscess
 - a. may require antibiotics, longer hospitalization, drainage with CT scan guidance, or another surgery to resolve
 - 1) anastomotic stricture
 - a. may result in constipation (unusual)
 - b. may require dilation through scope to repair
 - c. may require operation to repair
- 5) injury to ureter
 - a. structure than carries urine from kidneys to bladder
- 6) injury to or dysfunction of urinary bladder
- 7) bowel obstruction
 - a. usually from adhesions from surgery
 - b. can occur in 10-20% of patients
 - c. may require another operation
- 8) ileus
 - a. the bowels normally stop working for a few days after surgery. If they continue not to function after this, it is referred to as an ileus

- 9) sexual dysfunction
 - a. impotence or retrograde ejaculation in men
 - b. can occur in 10-60% of men
 - c. depends on age and level of rectal dissection
 - d. pain with intercourse in women
 - e. vagina may feel smaller or tighter after surgery or radiation therapy
- 10) injury to bowel and blood vessels
- 11) increased bowel movement frequency
- 12) bowel movement or gas leakage
- 13) bowel movement urgency

- 14) possible temporary or permanent colostomy (bag) or ileostomy
- 15) stoma complications
 - a. for those patients with ileostomy or colostomy
 - b. retraction, ischemia (poor blood supply), hernia, prolapse

- 16) general operative complications
 - a. heart attack: especially those with heart history
 - b. pneumonia
 - c. sepsis
 - d. blood clot in leg
 - e. blood clot from leg to lung (can be life threatening)
 - f. urinary tract infection
 - g. leg nerve injuries (result of retractors or leg stirrups: rare)

- 17) incisional hernia
 - a. may require operation to repair

- 18) possible death 0-2%