

Rectal Prolapse

OVERVIEW

This patient education piece is designed to help improve patients' understanding regarding rectal prolapse, specifically its presentation, evaluation and treatment. This information may also be useful to the friends, families, and caregivers of patients dealing with rectal prolapse.

Treatment of this condition may often require surgery, and this patient education material is intended for patients with rectal prolapse who are considering or have been recommended surgery. It will address why surgery may have been recommended, what the various treatment options are, what it involves and how it may help patients.

WHAT IS RECTAL PROLAPSE?

Rectal prolapse is a condition in which the rectum (the last part of the large intestine before it exits the anus) loses its normal attachments inside the body, allowing it to telescope out through the anus, thereby turning it "inside out". While this may be uncomfortable, it rarely results in an emergent medical problem. However, it can be quite embarrassing and often has a significant negative impact on patients' quality of life.

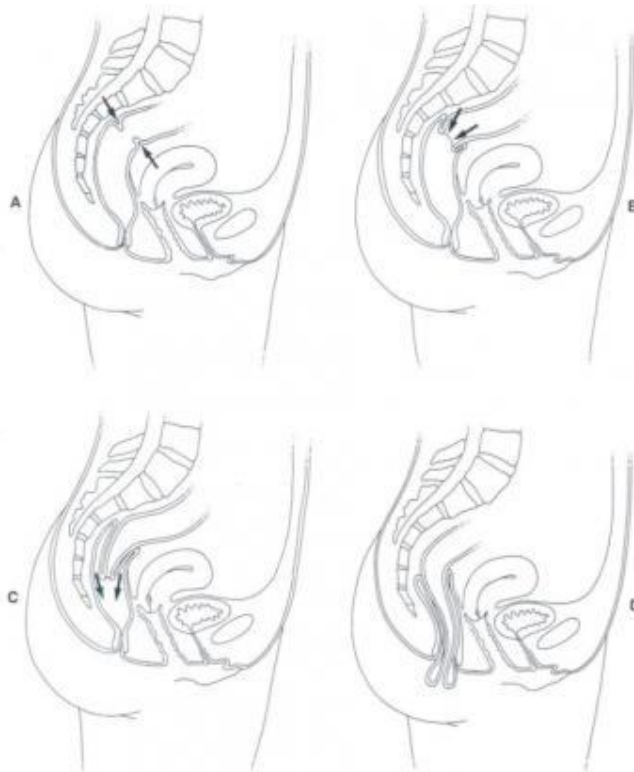


Fig. 21-2 Intussusception analogous to Moschowitz's concept. A, Starting point of intussusception. B, Early point of intussusception. C, Internal procidentia. D, Complete procidentia.

Diagram showing progressive prolapse of rectum until it has come completely outside the body

Fig 21-2, page 505 Principles & Practice of Surgery for the Colon, Rectum, and Anus. 2nd edition Gordon & Nivatvongs

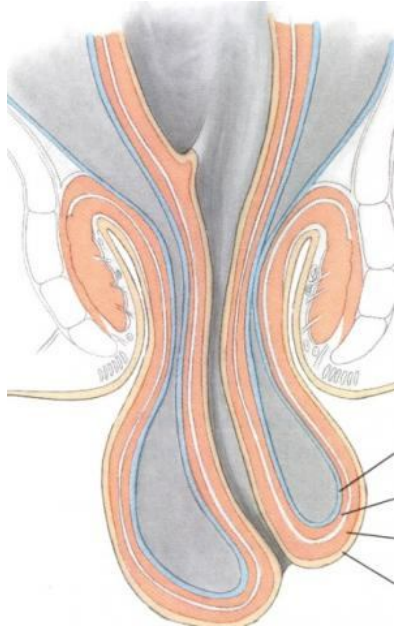


Figure 21-4, page 509 Principles & Practice of Surgery for the Colon, Rectum, and Anus. 2nd edition Gordon & Nivatvongs

Overall, rectal prolapse affects relatively few people (2.5 cases/100,000 people). This condition affects mostly adults, and women over 50 years of age are six times as likely as men to develop rectal prolapse. Most women with rectal prolapse are in their 60's, while the few men who develop prolapse are much younger, averaging 40 years of age or less. In these younger patients, there is higher rate of autism, developmental delay, and psychiatric problems requiring multiple medications.

Although an operation is not always needed, the definitive treatment of rectal prolapse requires surgery.

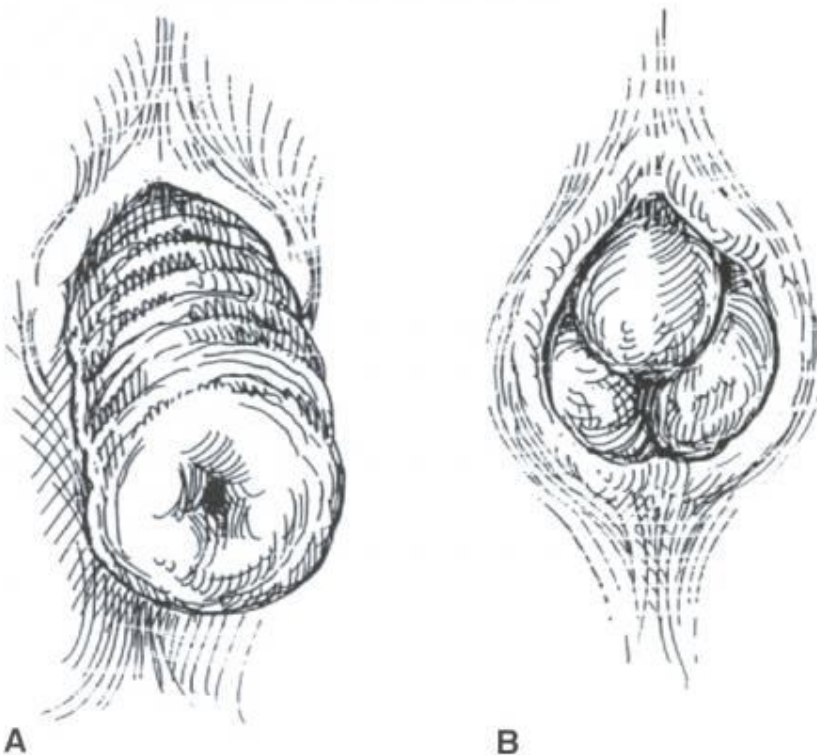
RISK FACTORS

While a number of factors have been shown to be associated with rectal prolapse development, there is no clear cut "cause" of rectal prolapse. Chronic constipation (infrequent stools or severe straining) is present in 30-67% of patients, while an additional 15% experience diarrhea. Some have assumed that the development of rectal prolapse is a consequence of multiple vaginal deliveries; however, up to 35% of patients with rectal prolapse have never had children.

PRESENTATION

Rectal prolapse tends to present gradually. Initially, the prolapse comes down with a bowel movement (BM) and then returns to its normal position. Patients may later describe a mass or “something falling out” that they may have to push back in following a BM. Until the prolapsed rectum goes back in, patients may feel like they are “sitting on a ball”. Rectal prolapse may be confused with significant hemorrhoid disease and can even be confusing at times to physicians not frequently evaluating and treating this problem.

Fig 33-1, page 550 ASCRS Textbook, 2nd Edition



A = Rectal Prolapse

B = Hemorrhoids

Once a prolapse is apparent, fecal incontinence (inability to control gas, liquid or solid BM) occurs in 50-75% of cases and is likely due to a number of factors. The anal sphincter is a structure made of a number of muscles that allow one to hold on to their stool when they have the urge to move their bowels. When the rectum is prolapsed, it has gone past the anal sphincter, and this allows stool and mucus to pass in an uncontrolled fashion. Pelvic nerve damage (pudendal nerve) has been shown in many patients with prolapse. The pudendal nerve contributes to the control of the anal sphincter and damage can result from direct trauma (birthing injury), chronic diseases such as diabetes, and from back injury or surgery. The anal sphincter is constantly stretched by the prolapse itself, adding an additional risk factor for incontinence.

Upwards of 25% to 50% of patients will report constipation. Constipation associated with prolapse may result from the bunching up of the rectum, creating a blockage that is made worse with straining, generalized coordination problems with the entire pelvic floor, and problems with the ability of the colon to move stool forward at a normal rate. It is not unusual for some patients to even note both bouts of constipation and incontinence as well.

Over time, prolapsed rectal mucosa may become thickened and ulcerated causing significant bleeding. Rarely, the prolapse becomes stuck or “incarcerated” outside the anus – a situation that could require emergent surgery.

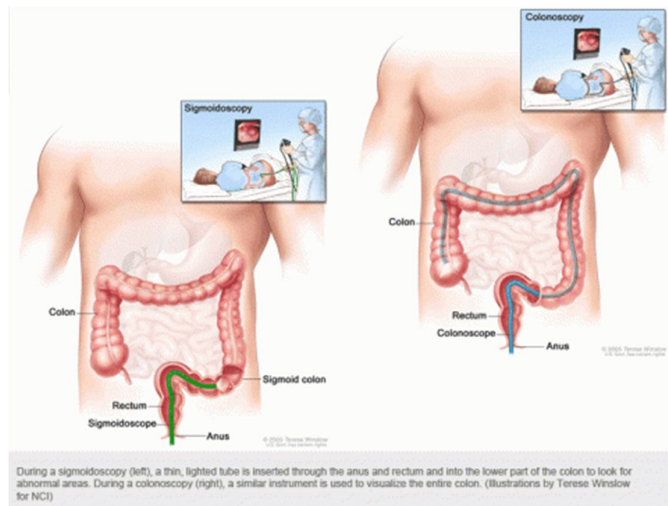
EVALUATION OF PATIENTS WITH PROLAPSE

Before considering surgery, a careful history and physical examination should be done. As mentioned above, attention should be focused on complaints of constipation, fecal incontinence, and any complaints of urinary incontinence (inability to control urine) or bulging into the vagina.

Direct examination of the anal region is important and often reveals low anal sphincter tone (sphincter feels “loose”). The patient may be asked to squeeze and relax their anal sphincter while the doctor has their finger the patient’s bottom. This helps the doctor get a sense of how well the anal sphincter is functioning. Formal anal manometry (a test that directly measures the anal sphincter pressures) could be recommended, as low sphincter pressures may affect the choice of procedure to repair the rectal prolapse.

While a spontaneous prolapse is obvious, it can be confusing as to whether a patient has significant hemorrhoids or rectal prolapse. To demonstrate a rectal prolapse, the patient may be asked to strain while being observed while squatting, or on a toilet or commode. While this may be somewhat embarrassing for patients, it is very important to make an accurate diagnosis, as the treatments of hemorrhoids and rectal prolapse are very different.

A colonoscopy will often be necessary to rule out any associated polyps or cancer prior to consideration of treatment for rectal prolapse. Colonoscopy is a procedure where a long, flexible, tubular instrument called a colonoscope is used to look at the entire inner lining of the colon (large intestine) and the rectum.



Colonoscopy picture from NCI Website

When the diagnosis remains in doubt, defecography may reveal the problem. This test involves the patient taking an enema containing x-ray contrast and taking x-ray pictures during the process of having a BM. Occasionally, additional contrast may be given to drink and/or placed into the vagina. As mentioned, rectal prolapse can occur in the setting of a more generalized pelvic floor problem. Twenty to 35% of patients with rectal prolapse complain of urinary incontinence, while another 15% of women have a significant prolapse of structures into their vagina (a feeling of something bulging into the vagina). These additional problems may also be demonstrated on defecography and may require surgery, typically involving surgeons from other specialties at the time of surgery for the rectal prolapse. Importantly, if these additional issues are not addressed at the time of fixing the rectal prolapse, the symptoms related to these other problems may worsen.

As mentioned, many patients will present with rectal prolapse in the setting of lifelong constipation. Depending upon the severity of symptoms, a patient may be asked to undergo a transit study to evaluate their colon's ability to evacuate stool. A transit study involves swallowing a capsule containing multiple markers that can be seen on an abdominal x-ray. Several x-rays are then taken over a five-day period to see how the markers move through the small intestine and colon, referred to as "transit time". Patients found to have unusually long transit times may benefit from having some or, less likely all, of their colon removed at the time of the repair of their rectal prolapse.



WHAT HAPPENS IF PATIENTS CHOOSE TO DO NOTHING ABOUT THEIR RECTAL PROLAPSE?

If a patient has been seen by a colon & rectal surgeon familiar with the diagnosis and treatment of rectal prolapse and given a diagnosis of rectal prolapse, they could potentially choose to do nothing about it. Patients choosing to do nothing can likely expect their amount of prolapse to get larger over time and to have the rectum prolapse more easily (may just prolapse with standing). If a patient chooses to delay treatment for a prolonged period of time, they should know that the longer a patient goes without having their prolapse repaired, the greater the chance of having permanent problems with fecal incontinence, as the anal sphincter is repeatedly stretched out and the chance of nerve damage is increased, too. The length of time that these changes will occur is widely variable and differs from person to person. In certain cases, the prolapse is very small or the patient is too sick to undergo an operation. In these cases, supportive garments can help with keeping the prolapse from coming out all the time.

Untreated, rectal prolapse does not turn into cancer.

SURGERY FOR RECTAL PROLAPSE

There are two general approaches to surgery for rectal prolapse – abdominal operations (through the belly) and perineal operations (through “the bottom”). Both approaches aim to stop the prolapse from occurring again and usually result in a significant improvement in quality of life.

The choice of surgery type depends on both patient factors and procedural factors. Patient factors include the patient’s age, sex, bowel function, continence, prior operations, and severity of associated medical problems. Procedural factors include extent of prolapse, what effect the procedure might have on bowel function and incontinence, complication rates of the procedure, recurrence rates of the procedure and the individual surgeon’s experience.

Most surgeons would agree that if a patient is medically fit for surgery, an abdominal approach may offer the best chance for a long-term successful repair of rectal prolapse. Perineal approaches are often better choices for very elderly patients or patients with very severe medical conditions in addition to rectal prolapse. Consideration can also be given to a perineal approach in younger males, as there is a small chance (1-2%) of causing sexual dysfunction due to nerve injury during the pelvic dissection that occurs during an abdominal approach. While this is very

unusual, it should be considered when making decisions about the type of surgery to perform. Young males may even want to consider banking sperm prior to the procedure in the very unlikely event they have sexual problems after the procedure.

Operative procedures for rectal prolapse can be performed under a number of different types of anesthesia. The patient and surgeon can decide what is appropriate for a given patient based on their particular circumstances. Potential options include:

General anesthesia (completely asleep with a “breathing tube” in place)
Under a spinal block (similar to an epidural injection during childbirth)
A combination of intravenous relaxing medications and local anesthesia (numbing medicine) injected around the anus after relaxing medications have been given. This is called monitored anesthesia with a perianal block.

ABDOMINAL APPROACHES

ABDOMINAL RECTOPEXY WITH POSSIBLE BOWEL RESECTION:

Most abdominal techniques involve making an incision in the lower abdomen and dividing the loose rectal attachments from the pelvic walls all the way to the floor of the pelvis. A rectopexy is then performed, whereby the rectum is pulled upwards and secured to the sacrum (back wall of the pelvis) in a variety of ways. Depending on the surgeon’s preference, the rectum may be sutured directly to the sacrum with stitches or a prosthetic material (mesh) may be included. Regardless of the specific technique used, the intent is to hold the rectum in the appropriate position until such a time as scarring occurs to fix the rectum in place. Overall, both of these techniques yield very good results, with recurrent rectal prolapse occurring in approximately 2-5% of cases.

When patients complain of a long history of constipation, removal of a portion of the colon may be included in an attempt to improve bowel function. The amount of colon removed is determined by the severity of constipation and may involve the use of the previously described colonic transit study. Interestingly, in patients with fecal incontinence prior to surgery, this symptom improves in about 35%, even with removal of part of the colon. This improvement often occurs within 2 to 3 months.

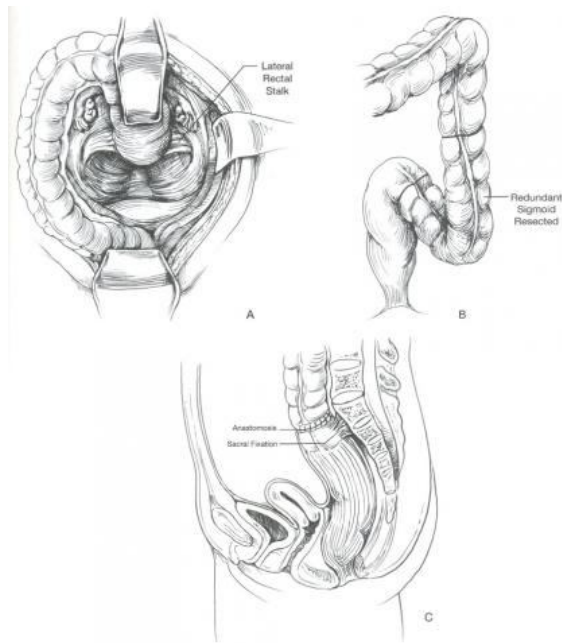


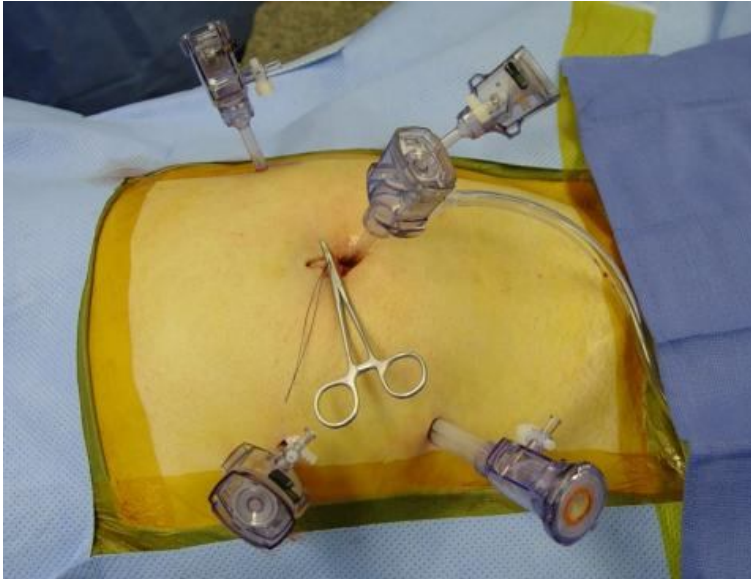
Figure 33-6, page 555

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It is important to note that although the prolapse can be fixed, the function (incontinence or constipation) may not always improve. In a small number of cases, a potential complication of abdominal rectopexy is the development of new or worsened constipation. Following abdominal rectopexy, 15% of patients will develop constipation for the first time and at least half of those who were constipated prior to surgery are made worse. It is not clear what is to blame for those findings. Fiber, fluids, and stool softeners may be needed in the setting of constipation following rectal prolapse repairs of any type. Occasionally, mild laxatives may be needed temporarily after surgery. Sexual dysfunction may be reported in some patients following the extensive pelvic dissection involved in this surgery.

MINIMALLY INVASIVE RECTOPEXY WITH POSSIBLE BOWEL RESECTION:

Minimally invasive techniques such as laparoscopy or robotically, are used in some centers with equivalent success to traditional abdominal procedures. Laparoscopy refers to the use of small incisions through which the surgeon may place a camera and surgical instruments, allowing them to perform the same procedures described above for abdominal approaches.



Laparoscopic trocars placed for colon surgery. Photograph, unpublished. (from the collection of Alessandro Fichera, MD, FASCRS)

The robotic approach similarly uses smaller incisions with the aid of a robot to perform the abdominal operation. In each of these instances, the operation that is performed is identical to an open approach, only through smaller incisions and the aid of a camera. Potential benefits of a laparoscopic approach include less pain, shorter hospital stay, and earlier return to full activity and work. Complication rates seem to be better than with open procedures and recurrent rectal prolapse appears to be the same as in open procedures (less than 5%). Not all surgeons have the experience or expertise to perform these operations, and as such, it may not always be available.

PERINEAL APPROACHES

It is generally believed that the perineal approach results in fewer complications and pain, with a reduced length of hospital stay. These advantages have, until recently, been considered to be offset by a higher recurrence rate. Recent data is unclear on this point, however, and a properly executed perineal operation may yield good long-term results.

PERINEAL RECTOSIGMOIDECTOMY:

The most common perineal approach is often referred to as a perineal rectosigmoidectomy or an "Altemeier procedure", named after the surgeon who popularized this operation. This approach to the surgical repair of rectal prolapse is done through the anus, with no abdominal incision. In the operating room, the rectum is made to intentionally prolapse outside the body and is then divided. The excess rectum and colon is pulled down and out of the body. A full-thickness excision is done, with the remaining colon pulled down and sewn or stapled to the anus. Lack of an abdominal incision, minimal pain, and a shorter hospital stay make this procedure an attractive option in appropriate patients.

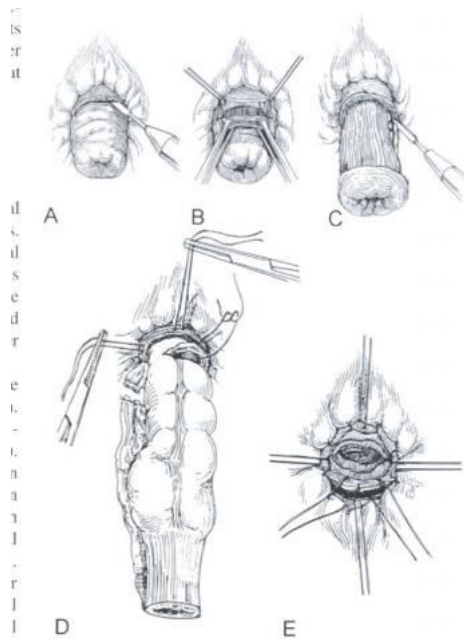


Fig 33-3, page 551

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Patients undergoing perineal rectosigmoidectomy tend to be older with more serious medical problems than those undergoing an abdominal repair. Additionally, patients with a small prolapse, or those with incarcerated prolapse (rectum “stuck” on the outside) with concerns for a non-viable (or “dead”) rectum, may need to undergo this approach, even if medically fit for an abdominal approach. Traditionally, recurrence rates have been reported to be much higher (> 10 %) than abdominal approaches (2–5%). Complication rates have been reported to range from 5-24 %, and include bleeding or leak from the new connection sewn or stapled in the pelvis, and pelvic infection. Fecal incontinence can be a bigger problem following this procedure compared to an abdominal rectopexy, though most patients have had pre-existing incontinence. The rectum’s job is to serve as a reservoir to hold stool, and this procedure removes the rectum. This leaves the colon to now do the job of the rectum, and it may not be able to hold the stool as well as the native rectum. A levatoroplasty may be performed to help combat this problem. A levatoroplasty is done at the same time as the perineal rectosigmoidectomy and involves “tightening” up the pelvic floor muscles by sewing some of them closer together. This seems to aid fecal continence in as many as two-thirds of patients.

MUCOSAL SLEEVE RESECTION (DELORME PROCEDURE):

Occasionally, a surgeon may choose to do a perineal procedure slightly less extensive than a perineal rectosigmoidectomy. A Delorme procedure does not involve a full thickness resection, as described in the perineal rectosigmoidectomy. Instead, the inner lining of the rectum is stripped away from the muscle and removed. The muscles of the rectum are then folded and sewn to themselves (plicate) to reduce the prolapse. This particular procedure may be recommended in the setting of a small

prolapse or if the prolapse is full-thickness but limited to partial circumference, where a perineal rectosigmoidectomy may be difficult to accomplish. Incontinence is improved in 40-50% of patients after this procedure.

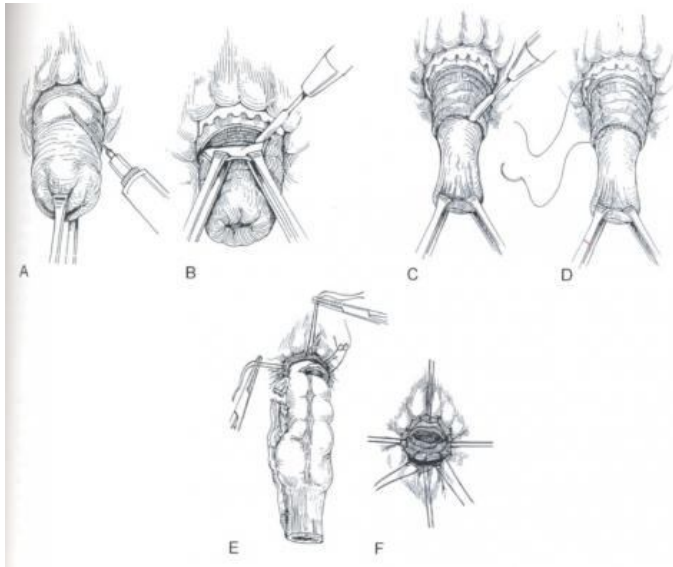


Fig 33-4, page 553

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Complications are quite wide ranging in various series (0-76%) and most were due to pre-existing medical problems. Complications specific to the surgery include bleeding, leakage of the sewn connection and stricture development (narrowing of the anal opening). Rates of recurrent prolapse (6-26%) are generally felt to be higher than with a perineal rectosigmoidectomy.

WHAT IS A COLON AND RECTAL SURGEON?

Colon and rectal surgeons are experts in the surgical and non-surgical treatment of diseases of the colon, rectum, and anus. They have completed advanced surgical training in the treatment of these diseases, as well as full general surgical training. They are well-versed in the treatment of both benign and malignant diseases of the colon, rectum and anus and are able to perform routine screening examinations and surgically treat conditions if indicated to do so.