Which operation is most effective for complete rectal prolapse?

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What you need to know

- Surgery, through the abdomen or perineum, is the definitive treatment to repair complete rectal prolapse
- A range of surgical techniques are used, but there is insufficient evidence to determine whether one technique is better than others in terms of rates of recurrence and complications such as constipation and incontinence
- Patient preferences and general fitness for surgery are useful to guide decision making

Rectal prolapse affects about 2.5 per 100 000 people each year in the United Kingdom.¹ It is more common in women.² Risk factors include multiple deliveries, straining, anorexia, traumatic vaginal delivery, and old age.³ Protrusion of the rectum through the anal canal can be distressing for the patient, causing discomfort and embarrassment. Complications include bleeding, constipation, incontinence, rectal ulcers, and, rarely, rectal ischaemia, which is an emergency.

Complete (full thickness) rectal prolapse involves protrusion containing all the layers of the rectal wall through the anus (fig 1). A mucosal prolapse occurs when mucosa alone protrudes through the anus. Internal intussusception is a prolapse of the rectum into the distal rectum or anal canal but without protrusion outside the anus.

Surgery is the definitive treatment and can provide complete resolution of full thickness rectal prolapse.³ Some patients, however, experience recurrence and complications such as constipation and faecal incontinence and may require further surgery.³ A minority of patients prefer symptom control, or are unfit for surgery, and are treated with laxatives and manual reduction.

In this article we focus on surgical management of full thickness rectal prolapse. There are a range of surgical techniques available (box 1),²³ but there is no consensus on which is the most effective.² Traditionally, the open abdominal procedure was reserved for younger, fitter patients, and perineal procedures were preferred for older people as they are considered safer.³

Box 1: Surgical options for complete rectal prolapse

- **Abdominal operations**—These can be performed open, robotically, or laparoscopically and generally comprise different forms of rectopexy (that is, mobilisation of and hitching up the rectum with sutures or mesh).³ Laparoscopy is the commonest technique.
- **Perineal operations**—Traditionally reserved for patients thought unfit to tolerate abdominal procedures. Both Delorme’s and Altemeier’s procedures have been reported to have a higher recurrence rate than abdominal procedures but are considered less invasive.³² Delorme’s procedure involves resecting redundant mucosa and plication of the muscle layer to shorten the rectum. Altemeier’s procedure involves resecting the redundant prolapsed bowel to restore the original anatomy.
- **Bowel resection**—This involves removing a part of redundant rectum or sigmoid via an abdominal approach, in addition to the repair itself.

What is the evidence of uncertainty?

We searched PubMed using the term “full thickness rectal prolapse” and read all studies published after the 2015 Cochrane review detailed below.² We focused on randomised controlled trials and systematic reviews, and excluded case reports and literature reviews.

Current best evidence from a Cochrane systematic review suggests that there is little difference in outcomes among people with full thickness rectal prolapse undergoing different operative repairs.³⁵ Up to a third of patients may experience recurrence of prolapse and other complications such as constipation and faecal incontinence, with either abdominal or perineal surgery. However, the evidence is poor quality and may not represent the true efficacy of the different techniques. There is limited low quality evidence from two trials that laparoscopy may have
fewer postoperative complications and reduce hospital length of stay compared with open abdominal surgery. Bowel resection along with repair surgery was seen to improve constipation as per evidence from three trials.

The Cochrane review1 (of 15 randomised controlled trials, 1007 participants) compared different surgical repairs for full thickness rectal prolapse in adults. The main outcomes were rates of recurrence, residual mucosal prolapse, faecal incontinence, and constipation. Recurrence rates ranged from 0 to 33% in the included studies and follow-up periods ranged from six months to five years. No difference in recurrence, complications, or quality of life for patients was seen between abdominal and perineal surgery. The authors concluded there were insufficient data to suggest whether the abdominal or perineal approach is more effective, or to determine superiority of the different surgical techniques with either approach. About a third of patients experienced complications—including constipation, incontinence, and reduced rectal compliance (a measure of pressure changes associated with increasing the volume of a rectal balloon)—in the two studies directly comparing abdominal and perineal surgery.

The evidence from studies within the Cochrane review offers further insight. For example, two studies (60 patients) compared laparoscopy to open surgery and found fewer postoperative complications and shorter hospital stay with laparoscopy. Bowel resection during rectopexy was associated with lower rates of constipation than rectopexy alone (115 patients across three studies). There was a higher risk of reduced rectal compliance (resulting in faster gut transit time) in the resected group, but there were no other statistically significant differences between groups.

High quality evidence is lacking: major methodological limitations of the studies include heterogeneity in patient populations, interventions, and outcomes; only five studies had a sample size greater than 50; and no more than three studies compared any single technique.

Two small randomised controlled trials published since 2015 compared abdominal approaches, including laparoscopic surgery versus robotic rectopexy, and suture rectopexy versus mesh rectopexy. Following the Cochrane review, further systematic reviews have included observational data, evaluated abdominal surgery, and compared different perineal procedures. The visual summary describes the findings of these studies. Different techniques have been compared but the studies are small, outcome measures differ, and follow-up is generally short. Overall, the quality of evidence remains low and limits its usefulness to guide practice.

Is ongoing research likely to provide relevant evidence?

We searched the US National Library of Medicine for ongoing trials on surgical repair of rectal prolapse. There are five ongoing trials and five completed studies awaiting publication. These include comparisons of rectopexy versus perineal procedures, endoluminal prolapse repair, and posterior and anterior repairs. Five of these studies are recruiting participants and have population sizes ranging between 10 and 30. Studies with adequate follow-up and large enough samples sizes would start to address some of the uncertainty, specifically around longer term outcomes such as recurrence rate.

What should we do in the light of the uncertainty?

The Pelvic Floor Society of the United Kingdom and Ireland—a multidisciplinary collaboration between colorectal surgeons and gynaecologists—has issued guidance, and also cites advice from the American Society of Colon and Rectum Surgeons regarding rectal prolapse in their literature. This advice for patients and doctors is available online.

Take a careful history and examination, assessing the severity of prolapse and whether it is causing the patient discomfort and symptoms such as constipation or faecal incontinence, avoiding confusion with haemorrhoids or other anal pathologies.

Discuss the options for treatment with your patient. Conservative management may reduce discomfort temporarily but will not reverse the prolapse. Resolution of symptoms is more likely with surgery, but about a third of patients can experience recurrence and complications such as constipation and incontinence after surgery. Describe the types of procedure that might be offered and refer the patient to a multidisciplinary team of gynaecologists, colorectal surgeons, and specialist nurses who will assess the patient and discuss the appropriate surgical options to consider.

Surgeons should discuss specific differences such as the reduced postoperative constipation with bowel resection. Severity of symptoms and the patient’s fitness and preferences are important considerations in deciding the appropriate treatment. For example, perineal procedures can be performed under spinal or epidural anaesthesia. Resection may be valuable if constipation is a key symptom preoperatively. Inform patients of possible complications after surgery to help make a shared decision around treatment.

What patients need to know

- See your doctor if you experience sensations of a lump coming out of the anus and/or associated disturbance in bowel movements
- Your doctor will examine you to check for rectal prolapse, often on a commode
- Most patients with rectal prolapse will require an operation to improve their symptoms; some patients may consider laxatives and manual reduction for initial relief
- Surgical repair may be performed through the anus (perineal) or through the abdomen (making a cut in the abdominal wall for open surgery or using a keyhole technique). There are different surgical techniques in either approach
- There is little evidence to suggest if one procedure is better than another in a particular patient. The evidence is mostly of low quality and shows similar rates of recurrence of prolapse and postoperative complications with abdominal and perineal surgery. Laparoscopic repair may have fewer complications.
- Your surgeon will discuss the different surgical options and the chances of recurrence or complications, taking into consideration your symptoms and your general fitness, as well as your preferences
- Aftercare is similar for the different procedures

Education into practice

- What are important considerations when discussing surgery for rectal prolapse with a patient?
- Recall a patient with a rectal prolapse that you managed at your practice. How might you alter your discussions about rectal prolapse surgery to better share the evidence and make a joint decision about the best way forward?
**Recommendations for future research**

Large, multicentre, randomised trials that examine:

- The safety and efficacy of the main surgical techniques
- Long term follow-up to estimate complication rates and recurrence, which may appear after 10 years
- Use of biological meshes versus synthetic meshes for repair

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**How patients were involved in the creation of this article**

A patient with a full thickness rectal prolapse awaiting surgery reviewed the manuscript and helped rephrase the box summarising the evidence. The carer of a patient with multiple surgeries for rectal prolapse reviewed this manuscript and expressed agreement with the content overall. We are grateful for their input.

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9 Alam NN, Nairng SK, Köckerling F, Daniels IR, Smart NJ. Rectopexy for rectal prolapse. Front Surg 2015;2:54. 10.3389/f SUS.2015.00054 26593438


Figures

Fig 1 Full thickness rectal prolapse (reproduced with permission of Société Nationale Française de Colo-Proctologie)