Rectal prolapse

Rectal prolapse is the protrusion of either the rectal mucosa or the entire wall of the rectum. Partial prolapse involves only the mucosa and usually only protrudes by a few centimetres. Complete prolapse involves all layers of the rectal wall.

- Prolapses of the rectum occur either with bowel movements or independently. In the elderly, rectal prolapse initially only occurs with defecation and then retracts spontaneously.
- More advanced rectal prolapses may occur when standing and so greatly interfere with the patient’s quality of life.

Epidemiology

- Uncommon but the true incidence is unknown because of under-reporting, especially in the elderly population.
- It is most common in the elderly but can occur in all ages, including children[1].
- Complete prolapse in adults is most common in elderly females[2].
- In children, rectal prolapse occurs most often in patients between 1 and 3 years of age[3].

Risk factors

- Increased intra-abdominal pressure – eg, constipation, diarrhoea, benign prostatic hypertrophy, pregnancy, severe or chronic cough (eg, chronic obstructive pulmonary disease, cystic fibrosis, whooping cough)[4].
- Previous surgery[5].
- Pelvic floor dysfunction[6].
- Parasitic infections – eg, amoebiasis, schistosomiasis[7].
• Neurological disease - eg, previous lower back or pelvic trauma, lumbar disc disease, cauda equina syndrome, spinal tumours, multiple sclerosis\cite{5}.

• Psychiatric disease\cite{8}.

In children, rectal prolapse may be associated with cystic fibrosis, Ehlers-Danlos syndrome, Hirschsprung’s disease, congenital megacolon, malnutrition and rectal polyps.

**Presentation**

• Mass protruding through the anus:

  • Initially only after a bowel movement and usually retracts when the patient stands up.
  
  • Later the mass protrudes more often, especially with straining and Valsalva manoeuvres such as sneezing or coughing.
  
  • Finally, the rectum prolapses with daily activities such as walking and may progress to continual prolapse.
  
  • Patients may have to replace it manually.
  
  • Pain, constipation, faecal incontinence, discharge of mucus or rectal bleeding may occur.
  
  • If seen on examination, the protruding mass should show concentric rings of mucosa, which are classic signs of rectal prolapse.
  
  • Examination may also reveal a rectal ulcer and decreased anal sphincter tone.

**Differential diagnosis**

• Rectal prolapse must be differentiated from prolapse of an intussusception or a rectal polyp.

• Rectal prolapse can usually be differentiated from a haemorrhoid by the presence of symmetrical circumferential folds occurring with a rectal prolapse.
Investigations

- **Barium enema** and/or colonoscopy: To evaluate the entire colon prior to surgery for rectal prolapse to exclude any other colonic lesions.

- Other investigations to assess underlying conditions include stool microscopy and cultures for gastrointestinal infection and sweat test for cystic fibrosis.

- Anal physiology tests are sometimes used to distinguish between mucosal and full-thickness prolapse and may be useful in patients about to undergo surgery. They include defecography, anal manometry, continence tests, electromyography of the anal sphincter and the pelvic floor and nerve stimulation tests[9].

- Rigid proctosigmoidoscopy should be performed to assess the rectum for additional lesions, especially solitary rectal ulcers. These ulcers are present in about 10–15% of patients with either internal or full-thickness prolapse.

Associated diseases

- Affected adult women may also have uterine or bladder prolapse, or an associated cystocele.

Management

- Rectal prolapse can usually be reduced with gentle digital pressure. Sedation and local perianal anaesthesia may help the reduction.

- Contributing factors should be treated – eg, constipation or diarrhoea.

- Prompt surgical referral is recommended for an irreducible prolapse and for strangulation or gangrene of the prolapsed tissue[10].

- Partial prolapse often responds to conservative measures but occasionally requires excision of prolapsed mucosa.

Conservative treatment
• Children: gently replace using water-soluble lubricant. Advise parents on the need for a high-fibre diet and inadvisability of straining on stool. A mild laxative may be required. Very occasionally a submucosal injection of a sclerosant is also indicated.

• Elderly: often well tolerated and concealed with the patient manually reducing the prolapse. In those unfit for surgery, a subcutaneous circumanal rubber ring may be fitted. However, this often fails either because it is too tight or too loose, resulting in constipation or recurrent prolapse.

**Surgical treatment**

• Emergency rectosigmoidectomy is required if the prolapsed tissue is incarcerated and non-viable[^10].

• Mucosal prolapse is treated with a haemorrhoidectomy. Stapled haemorrhoidopexy offers an alternative to conventional surgery[^11].

• Abdominal procedures[^8]:
  
  • Abdominal procedures are preferred for all patients fit for abdominal surgery.
  
  • Abdominal procedures include anterior resection (not often performed), Marlex rectopexy (Ripstein procedure), suture rectopexy and resection rectopexy (Frykman–Goldberg procedure)[^12].
  
  • In suture fixation rectopexy and resection rectopexy, the rectum is mobilised and the mesorectum sutured to the sacral promontory and the presacral fascia. In resection rectopexy, a sigmoid colectomy is also performed[^12].
Perineal procedures\cite{12} \cite{13}:

- Perineal procedures have a higher recurrence rate but a lower morbidity rate and are often performed in the elderly or in patients who have a contra-indication to general anaesthetic.

- Perineal procedures include anal encirclement (Thiersch’s wiring procedure), Delorme’s mucosal sleeve resection and Altemeier’s perineal rectosigmoidectomy.

- The most common procedure is Delorme’s operation\cite{8}.

- Altemeier’s procedure is an alternative perineal procedure advocated by some surgeons, particularly for the elderly due to its low incidence of recurrence and continence complications\cite{14}.

- Laparoscopic repair is currently under study but laparoscopic surgical rectopexy procedures have shown outcomes as good as for open procedures\cite{15}.

- A combined laparoscopic-perineal procedure has been developed\cite{16}.

**Surgical treatment for children\cite{17} \cite{18}**

- Surgical intervention is usually reserved for failed conservative management in children younger than 4 years who have tried non-surgical management for longer than one year\cite{19}.

- Surgery may also be used in cases of complicated rectal prolapse – eg, recurrent rectal prolapse that requires manual reduction, painful prolapse, ulceration and rectal bleeding.
There are many different operations used, including:

- **Circumferential injection procedures**: injection procedures use a sclerosant to promote adhesion formation, which stabilises the rectum.
- **Thiersch’s operation**: synthetic materials are used to create a perianal sling to support the rectum.
- **Lockhart-Mummery’s operation**: mesh gauze packing is placed temporarily in the retrorectal space to promote adhesions that stabilise the rectum.
- **Cauterisation treatment**: the prolapsed rectum is cauterised to produce inflammation and scarring that prevents prolapse.
- **Abdominal rectopexy**: endoscopic or open approach. The perirectal tissues are attached to the presacral area to assure correct anatomical positioning and tissue adherence.
- **Ekehorn’s rectopexy**: a suture is placed in the rectal ampulla through the lowest part of the sacrum to induce inflammation and adhesions between the rectal wall and perirectal wall.
- **One study reported** that the use of laparoscopy in the management of complete rectal prolapse (using sutures, mesh, resection or levatorplasty) is safe, effective and associated with improved functional outcome \(^{[20]}\).

**Complications**

- **Mucosal ulceration** \(^{[21]}\).
- **Necrosis of rectal wall** \(^{[4]}\).
- The most common postoperative complications are bleeding and dehiscence at the anastomosis \(^{[5]}\).
- Postoperative recurrence rate can be as high as 20%, regardless of operative procedure \(^{[5]}\).
Prognosis

- The prognosis for elderly patients presenting with rectal prolapse is variable and depends on the nature of any underlying or associated problems and the age and general well-being of the patient.

- Spontaneous resolution usually occurs in children but a minority of children who experience rectal prolapse continue to experience it in their adult lives.

- Of the children with rectal prolapse who are aged 9 months to 3 years, 90% will need only conservative treatment. For children who first experience prolapse when older than 4 years, a much lower rate of spontaneous resolution occurs\[^{18}\].

Further reading


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<td></td>
<td>Dr Sarah Jarvis MBE, FRCGP</td>
<td>doc_573</td>
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<td>20/11/2023</td>
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