Rectal Prolapse

Definition

Protrusion of the rectum through the anus. A commoner form is rectal intussusception where the rectum prolapses, but does not protrude through the anus. Most common is mucosal prolapse where redundant rectal mucosa prolapses without associated muscle coat. It is commonest at the extremes of age, and coexists with other pelvic floor disorders such as bladder prolapse. Women represent 80-90% of patients. A small but challenging cohort are young patients between 17-40 years of age, including males.

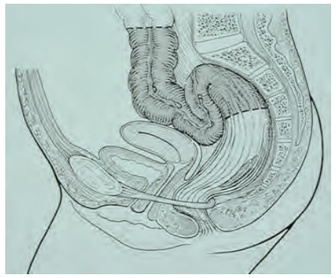


Fig 1 Pre operative edundant colon

Symptoms

Patients are often concerned that they have cancer. There is a protruding mass which bleeds and a change in bowel habit. Milder symptoms are a reducible protrusion and mucous discharge. Late presentation is associated with faecal incontinence, mainly due to repeated stretching of the anal sphincter and its nerve supply, the pudendal nerves. Almost 30-60% of women have urinary incontinence and similar number have genital prolapse. A high percentage have associated faecal incontinence, and almost the same number have co-existing constipation.

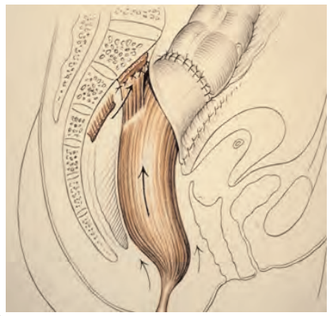


Fig 2 Post operative sigmoid resection and rectopexy

Investigation

History and examination of the whole patient is particularly important in view of the high likelihood of co-morbidity. Colonoscopy is mandatory and pelvic floor radiology assists in evaluating other pelvic floor disorders. Anal manometry assesses sphincter pressures.

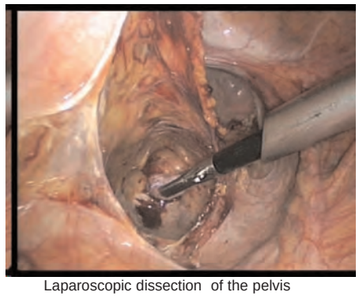
Management

Non-operative palliation for patients too frail for any intervention, is achieved by manual reduction by carers. Historically, trusses and breeches were proposed as well as burning the anus to cause a stricturing scar.
The aim of surgery is to control the prolapse, restore continence, prevent constipation or impaired evacuation, while avoiding incontinence. This is a tall order and it is no surprise that over 100 procedures have been described. However, several procedures are effective and some are applicable even in the frailest of patients.

Operations are classified as abdominal or perineal according to the route of access.

Take home message

This is a treatable condition even in the very frail patient.
Most patients derive significant benefit.
Avoids longterm manual reduction.
Recurrence after a perineal repair still allows a repeat procedure



Laparoscopic dissection of the pelvis

Abdominal operations (Figs 1 & 2) involve mobilizing the rectum from its pelvic attachments and then fixing it to the sacrum with sutures or a mesh. In constipated patients a redundant sigmoid colon may be resected simoultaneously.

Perineal procedures are ideal for the frail patient as they are non-invasive, can be performed under spinal anaesthesia and are well tolerated. The published results also reflect a surprisingly good outcome regarding constipation, even better than the abdominal approach, but they have a higher recurrence rate, reported between 5-38%.

In the USA the prolapsed rectum is resected by simply amputating it and resturing the proximal colon to the anus. In this country, and Europe, the Delorme's procedure, described in

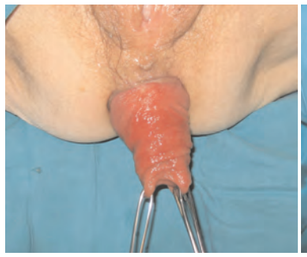


Fig 3 Prolapsed rectum

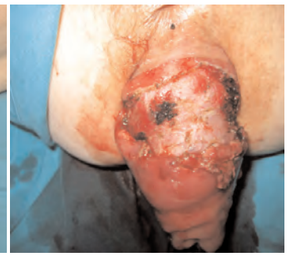


Fig 4 Start of dissection of the mucous membrane sleeve

1900, is preferred. (Figs 3 - 8) The mucosa is stripped off the prolapsed rectum and the remnant tube of bare muscle is plicated circumferentially allowing the prolapse to collapse like an accordion, back through the anus.

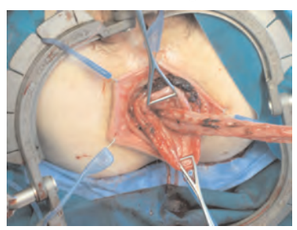


Fig 5 Mucous membrane tube resected off the muscle

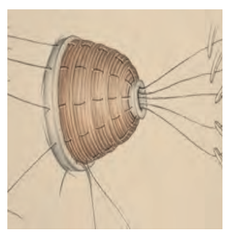


Fig 6 Plicating sutures to the muscle tube

Simultaneous procedures can be undertaken for genital prolapse whether the abdominal or perineal route is being used. The abdominal operation is ideally suited to laparoscopic surgery. Transanal stapling is useful in milder cases of rectal intussusception, but robust data has not yet been published.

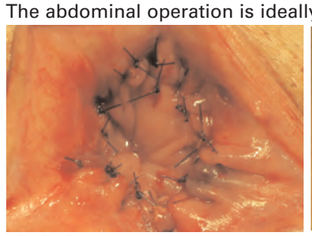


Fig 7 Reduced muscle tube and mucosal anastomosis

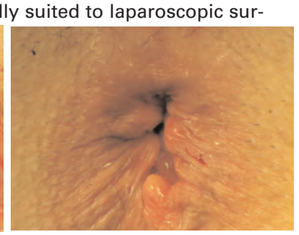


Fig 8 Final appearance

GASTRO-INTESTINAL UPDATE

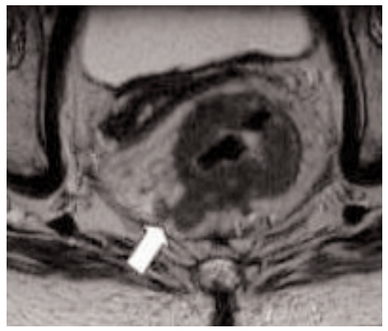
Dr Matley & Partners
www.surgcare.co.za

Editor: Dr Bob Baigrie

Role of MRI in Evaluation of Rectal Cancer

Derek Solomon (Tuft & Partners)

Rectal cancer is defined as a tumor with its lower edge within 15cm of the anal verge. It is technically challenging for the surgeon and local recurrence in the pelvis is a common result of treatment failure. The mesorectal fascia encloses the fatty mesorectum surrounding the rectum and forms the circumferential resection margin in total mesorectal excision (TME) surgery. Tumor extending to within 1mm of the potential circumferential resection margin strongly predicts local recurrence and poor survival.

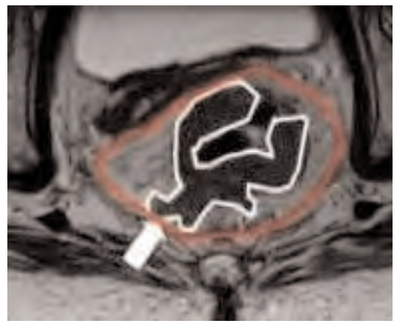


Nearly circumferential carcinoma spreading to mesorectal fat

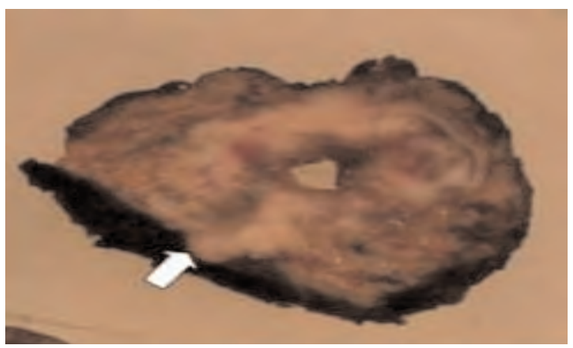
Preoperative radiotherapy or chemotherapy may facilitate more successful surgical excision. Tumour extent is usually assessed with digital examination, endorectal US or CT for fixity to adjacent structures, but these methods do not accurately demonstrate the relation of tumour to the mesorectal fascia.

Patients with potentially affected resection margins need to be identified preoperatively, because this is the primary determinant of local recurrence.

High resolution MRI consistently demonstrates the mesorectal fascia and can reliably predict involvement of circumferential margin.



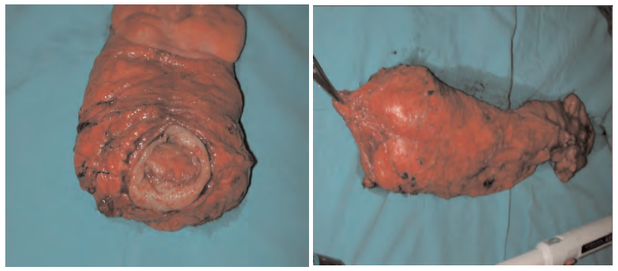
Cancer outlined in white. Mesorectal border in red. The tumour has spread through the mesorectum to it's border.



The operative sectional specimenmirroring the MRI

MRI has a 95% confidence level for predicting a clear resection margin, compared with digital rectal examination, which has an accuracy of 70%.

MRI is also able to provide information on:
- distance from lower edge of tumor to anorectal margin
- presence of pelvic lymphadenopathy
- involvement of adjacent structures eg. Prostate, seminal vesicles, bladder, vagina and pelvic side wall.



A wet specimen of rectum containing a cancer visible in the lumen.
The thick meso-rectal "package" is well illustrated in this complete mesorrectal excision

TAKE HOME MESSAGE

In rectal cancer, the presence of tumor within 1mm of the circumferential margin, strongly influences outcome and is an independent predictor of survival and local recurrence.
Preoperative radiotherapy or chemotherapy may positively influence the nature of surgery and overall outcome.
MRI is an accurate and reproducible imaging technique for preoperative staging. It is used in conjunction with clinical assessment and forms part of a multidisciplinary approach to plan individualised treatment.

Editorial comment

The colorectal unit in Oxford, UK, was one of the first to investigate MRI in rectal cancer in the mid 1990s. It was introduced to the Practice after Dr Baigrie, who trained in Oxford, joined us in 1997, and was combined with the introduction of pre-operative short course radiotherapy. It was later introduced to the colorectal unit at Groote Schuur when they acquired their MRI scanner about 4 years ago. It has proved an essential tool in our management of this disease. It is gradually becoming more widely used as others realise its value. Dr Solomon's enthusiasm and enormous expertise has been vital to its establishment in the local environment.

Napoleon's Piles

Napoleon's piles

Major events of history have frequently turned on seemingly trivial matters and the Battle of Waterloo may have been influenced by a set of very painful, thrombosed haemorrhoids.

We have good evidence that Napoleon had a history of haemorrhoids, predisposed to by his erratic eating and life-long constipation. Eight years prior to Waterloo, Napoleon wrote to his younger brother, Jerome, stating, "I understand that you are suffering with haemorrhoids. The simplest way to get rid of them is to have three or four leeches applied. Since I have used this remedy, that is, for ten years, I have not been tormented."

He was famously troubled with haemorrhoids on his triumphant march back to Paris from exile on the isle of Elba. As he travelled north, attracting great crowds, he was forced to stop and for a time he went by carriage.
For milder episodes of thrombosed haemorrhoids, Napoleon customarily used a lotion containing subacetate of lead called "eau blanche". The milky appearance of this liquid was from the interaction of the lead with calcium sulfate in ordinary water.

In the 100 days prior to Waterloo, Napoleon worked furiously raising an army, putting down royalist uprisings, and amassing the equivalent of 20 million dollars. With fatigue and ill health he became fat, lethargic, and tentative. A few days prior to Waterloo, Napoleon had defeated General Blucher at Ligny. Instead of exploiting the advantage, Napoleon was in a state of complete exhaustion and went to bed; no one dared wake him.

On the day of Waterloo, June 18, 1815, Napoleon was, not in good health. He spent most of the day at a small card table on a hill where he could overlook the battlefield. At 10 o'clock on the morning of the battle, with the British and Prussian armies patiently waiting for Napoleon to start, the Emperor declared that he needed a nap and was not to be awakened until 11am.

In past campaigns, this man was on horse-back at the head of his armies, leading. When he did get up and walk, it was noted that he walked with difficulty, with his legs spread apart. He was having what the French call "une crise hemorroidale."

Napoleon never accepted any blame for his defeat, claiming that it was the result of bad weather and bad generals.

Conclusion
Did Napoleon's physical problems at Waterloo make a difference? There had been heavy rains which created *"an* ocean of mud" that affected the heavy French artillery. The French were outnumbered and were becoming tired of war, with a lack of resolve and less enthusiasm. And so Napoleon met his Waterloo.

Barrett's Oesophagus

Barrett's oesophagus: Antireflux surgery compared to PPI therapy

BACKGROUND

Barrett's esophagus is a risk factor for the development of oesophageal adenocarcinoma. The normal squamous epithelium of the distal oesophagus is replaced by a variable length of glandular epithelium with intestinal metaplasia. A question exists as to whether antireflux surgery reduces this risk.

METHODS

In this comprehensive review from the USA, recently published in the world's most cited surgical journal, the authors determined whether patients with Barrett's esophagus, who undergo antireflux surgery, get less oesophageal cancer than those who take PPI therapy. They also studied the probability of disease regression/progression. They reviewed 2011 abstracts, of which 100 full-text articles were reviewed. The incidence of adeno-ca and the proportion of patients developing progression or regression of Barrett esophagus and/or dysplasia were extracted.

RESULTS

In surgical and medical groups, 700 and 996 patients were followed for a total of 2939 and 3711 patient-years, respectively. The incidence rate of oesophageal adeno-ca was 2.8 per 1000 patient-years among surgically treated patients and 6.3 among medically treated patients (P = 0.034, highly significant statistical difference).

Heterogeneity in incidence rates in surgically treated patients was observed. Among controlled studies, incidence rates were 4.8 and 6.5 per 1000 patient-years in surgical and medical patients, respectively (P = 0.320, significant statistical difference).

Probability of progression or lengthening of Barrett's metaplasia was 2.9% in surgical patients and 6.8% in medical patients (P = 0.054, highly significant statistical difference).

Probability of regression was 15.4% in surgical patients and 1.9% in medical patients (P = 0.004, highly significant statistical difference).

CONCLUSIONS: Antireflux surgery is associated with regression of Barrett's oesophagus and/or dysplasia. However, evidence suggesting that surgery reduces the incidence of adenocarcinoma is largely driven by uncontrolled studies.

Reference: Chang EY, Morris CD et al. Annals Surgery; July 2007.

Recommendation

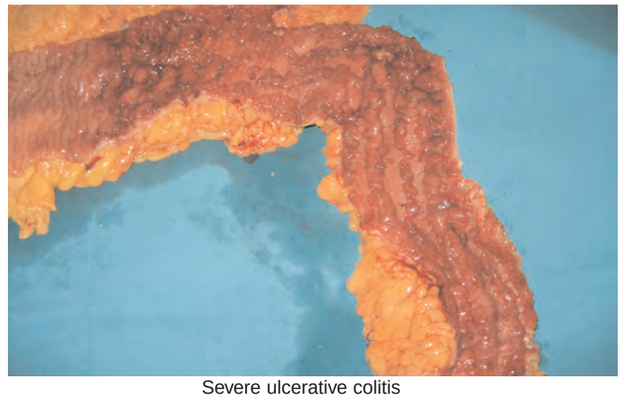
We do not recommend laparoscopic antireflux surgery for all patients with Barrett's oesophagus. The risk of cancer remains small. However patients with symptoms of reflux and Barrett's change should be appropriately informed about the surgical option rather than long term medication.

Inflammatory Bowel Disease & Prenancy

Inflammatory Bowel disease increases the risks of pregnancy.

A recent UK study has looked at the risk to pregnancy of inflammatory bowel disease (ulcerative colitis and Crohn's). These diseases have a typical onset during the peak reproductive years and knowledge of any adverse effect on pregnancy would be important in the management of the pregnancy.
They reviewed the literature and undertook a meta-analysis to compare outcomes between women with IBD and normal controls. A total of 3907 patients with IBD (Crohn's disease 63%, ulcerative colitis 36%) and 320 531 controls were analysed.
For women with IBD, there was a nearly 2-fold increase in prematurity (<37 weeks gestation) compared with controls. The incidence of low birth weight (<2500 g) was over twice that of normal controls. Women with IBD were 1.5 times more likely to undergo caesarean section and the risk of congenital abnormalities was found to be nearly 2.5-fold increased.

CONCLUSION: The study has shown a higher incidence of adverse pregnancy outcomes in patients with IBD. They should be treated as a potentially high-risk group. Further studies are required to clarify which women are at higher risk, as this was not determined in the present study.



Severe ulcerative colitis

Reference: A meta-analysis on the influence of IBD on pregnancy. Cornish J et al. GUT, 2007 56: 830-7

Irritable Bowel Syndrome

IBS INCREASES THE RISK OF OTHER CONDITIONS

While previous research has linked IBS with other conditions, there have always been issues relating to study design, such as the lack of a control group and an inability to discount the possible influence of other risk factors. This has inhibited definitive conclusions on the subject.

The findings from a large study from Boston University in late 2006, confirm that patients with IBS are at increased risk of *depression, migraine and fibromyalgia*. Fibromyalgia is most easily defined as a chronic condition of fatigue, muscle pain and other symptoms.

METHOD More than 125 000 subjects were studied including a control group. Subjects were drawn from a large US health plan and were seen for either IBS symptoms or routine medical care (the control group)

RESULTS IBS patients were 60% more likely to have any one of the three disorders. The elevated risks for depression, migraine and fibromyalgia were 40%, 60% and 80% respectively.

CONCLUSION This well constructed study supports previous reports which have promoted speculation that all four disorders share an underlying biological mechanism.

REFERENCE BMC Gastroenterology Sept 2006.

Garron Caine MbChB FRCS OBE

Garron died on 7th January as a result of metastatic pancreatic carcinoma.

This last year of Garron's life has surely been an inspiration to many. Whatever he felt about his illness, particularly with his insight into the nature of the disease, he consistently portrayed a sense of determination that the dignity of life needed to be maintained, that the day to day activities should continue and that he would continue to give selflessly of himself. Everything Garron did throughout the time we have known him was done with total commitment and enthusiasm.

For all his partners, we feel loss. We know how enriched we have been. We have a feeling of disorientation, as for so many years we have been guided by a surgical giant. We have always been able to fall back upon his wisdom, on his ability to see the whole picture and on his inate humanity, He had such balance, such humility, such extraordinary energy and zeal, such generosity. He had a genuine love of surgery and a natural surgical dexterity that few possess. He was demanding in the operating theatre yet he was quick to express his gratitude to all the staff . He never fudged an issue - one always knew where one stood with Garron.

Our contact with him raised our effort, our attitude, our standards, expectations and aspirations to new levels. To us he represented the very best in our profession.

Garron offered us a sense of permanence, but he has passed now into the very real permanance of things unseen and not understood, but valuable, alive, loved and everlasting.