

THE USE OF LAPAROSCOPIC TECHNIQUES IN THE SURGICAL MANAGEMENT OF RECTAL PROLAPSE

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Rectal prolapse or procidentia is a disabling surgical problem and controversies regarding its management continue to stimulate a lot of interest into the study of its aetiology, pathophysiology, functional aspects and concepts of surgical management. Many surgical techniques for rectal prolapse have been described through the last century. None has however been shown to be the ideal method. Many surgeons believe that good risk patients are best managed by a trans-abdominal proctopexy⁽¹⁻³⁾ procedure necessitating a laparotomy incision, while the poor risk or elderly patients are better managed by perineal proctosigmoidectomy or the Delorme procedures⁽⁴⁾.

There have been several recent reports on the use of laparoscopic techniques in the surgical management of the good risk patient with rectal prolapse. This is related to the perception that avoidance of a laparotomy incision will allow for a faster recovery from surgery and a better aesthetic result.

Although the precise role of laparoscopic surgery in the treatment of colon and rectal disease is yet to be defined, its use in the surgical management of rectal prolapse has several compelling features. Firstly, since this disease is benign, there is no concern for resection margins and in selected patients, no resection is required at all. Secondly, laparoscopic mobilisation of the rectum has also been shown to be safe and feasible⁽⁴⁻⁶⁾. Thirdly, many patients with rectal prolapse belong to an older age group with coincident disease and therefore may not be the best candidates for major laparotomies.

Thus, attempts to reduce morbidity may be realised theoretically when the surgical procedure for rectal prolapse is performed laparoscopically, avoiding a major laparotomy incision. However, it remains controversial that the abdominal approach be used at all in treating rectal prolapse as some surgeons now advocate perineal repairs even in good risk patients⁽¹⁾.

Berman and other authors have described that procedures for treating rectal prolapse may constitute one of the best applications for colorectal laparoscopic techniques⁽⁸⁾. Multiple variations of laparoscopic technique for the management of rectal prolapse have been described, all of which are similar to the conventional "open" approaches. Currently, the most common laparoscopic technique involves using a polypropylene mesh ("Marlex", C.R. Bard, Inc., Billerica MA) which is introduced into the peritoneal cavity following rectal mobilisation.

Berman from Brunswick, Georgia in 1992, was the first author who described a case of laparoscopic rectopexy in a 59-year-old woman using a newly designed laparoscopic sacral

Table I – Laparoscopic rectal prolapse surgery: recent literature

Author/ Year	No. of patients	Operative procedure	Length of operation (min)	No. of hosp. days (median)
Berman/1992 ⁽⁸⁾	1	Rectopexy, Marlex tacked to sacrum and stapled to rectum	NS	NS
Ballantyne/1992 ⁽¹⁴⁾	1	Anterior resection	NS	NS
Senagore/1993 ⁽¹⁰⁾	6	Anterior resection	180	4
Munro/1993 ⁽⁹⁾	1	Rectopexy, Marlex stapled to sacrum and rectum	NS	4
Cuesta/1993 ⁽¹²⁾	4	Rectopexy, Marlex stapled to sacrum and sutured to rectum	180	6
Cuschieri/1994 ⁽¹¹⁾	5	Rectopexy, Marlex sutured to sacrum and rectum	180	4
Kwok/1994 ⁽¹³⁾	1	Rectopexy, Marlex stapled to sacrum and rectum	NS	4
Darzi/1995 ⁽⁵⁾	29	Rectopexy, Marlex stapled to sacrum and sutured to rectum	95	5
Eu/1995 ⁽¹⁵⁾	13	Rectopexy, sutured	180	6

*NS=Not Stated

tacker, laparoscopic hernia staplers and a Marlex mesh (C.R. Bard, Inc., Billerica, MA)⁽⁸⁾. The laparoscopic sacral tacker was introduced transvaginally via a 12 mm laparoscopic trocar to fix the mesh into the sacral promontory. Laparoscopic hernia staplers were then used to fix the mesh to the side of the rectum. The patient has subsequently done well post-operatively with no evidence of recurrent prolapse at a short follow-up period of 6 months.

Munro et al described a case of laparoscopic rectopexy in a 74-year-old woman using a Marlex mesh and an Endopath Endoscopic stapler (J and J, Cincinnati, OH)⁽⁹⁾. Senagore et al described 6 cases of laparoscopic anterior resections for the management of rectal prolapse⁽¹⁰⁾. Although there were no post-operative mortality, there were 2 cases requiring laparotomy. One patient had severe rectal scarring requiring conversion while the other patient had to be re-operated for severe trocar site haemorrhage.

Several other variations of laparoscopic techniques for the surgical treatment of rectal prolapse involve fixation of the rectum to the pre-sacral fascia with a foreign material with or without

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sigmoid resection, or just a sigmoid resection alone with rectal mobilisation⁽¹¹⁻¹⁴⁾. A slightly different technique has been described by the Cleveland Clinic Foundation⁽¹⁵⁾. Thirteen patients with rectal prolapse without constipation underwent laparoscopic suture rectopexy which involves laparoscopic rectosacral fixation with four sutures following full rectal mobilisation. No foreign body or mesh was used and no resection was performed as all these patients were not constipated. There was no evidence of any recurrence of rectal prolapse at median follow-up of 12 months. This technique was found to be feasible, effective and simple. Furthermore, as no foreign material is used, septic risks could be minimised.

In conclusion, the use of laparoscopic technique for the surgical management of rectal prolapse seems feasible and is a definite surgical option for the fit patient with rectal prolapse. However studies with larger series and longer follow-up period will be required to establish its exact role in the surgical treatment of rectal prolapse.

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