

Surgical management of rectal prolapse: a cross-sectional perspective

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Abstract: *Background:* Rectal prolapse presents with a constellation of symptoms which can impact on patient lifestyle. Significant equipoise exists amongst the surgical community with regards to the diagnosis of internal rectal prolapse and its management. *Objective:* To demonstrate that the management of patients with rectal prolapse is far from standardized and that there is uncertainty in the decision making in rectal prolapse treatment. *Methods:* A prospective survey to assess practices was mailed to colorectal surgeons in Australia and New Zealand. The survey was divided into sections on surgeon demographics, patient evaluation, clinical scenarios with varied patient morbidity and preferred surgical approach, and finally a section on complications and follow-up. *Results:* The results of this study illustrate that as in other countries, the management of patients with rectal prolapse is far from standardized. Most controversy appears to be associated with the significance of the different grades of internal rectal prolapse versus external rectal prolapse and then its subsequent management. It was also noted that treatment preferences varied when comparing senior with junior colorectal surgeons. *Conclusion:* This survey affirmed that the management of patients with rectal prolapse is far from standardized and that there is uncertainty in the decision making in rectal prolapse treatment. By shedding more light on the debate amongst surgeons, this survey demonstrates the need for further more prospective studies to be conducted to aide in the development of guidelines.

Keywords: Surgery; Rectal prolapse; Survey epidemiology.

INTRODUCTION

Prolapse of the rectum involves full thickness intussusception of the upper rectum and/or colon¹⁻³. When the prolapse descends as far as the anal canal it is considered an internal rectal prolapse (IRP). When it protrudes beyond, it is an external prolapse (ERP)⁴.

Rectal prolapse presents with a constellation of symptoms which can significantly impact on patient lifestyle⁵⁻⁶. It principally affects women and its incidence increases with age. In more than 50% of cases, ERP is associated with fecal incontinence⁵⁻⁷. Patients presenting with IRP often complain of obstructed defecation and/or fecal incontinence symptoms. Mucosal prolapse can also occur and should not be confused with rectal prolapse, which is full thickness.

Significant equipoise exists amongst the surgical community with regards to the diagnosis of IRP and its management. Investigation of these patients is often not consistent as is the choice of surgical intervention, whether open, laparoscopic, transabdominal or perineal⁸. Of late there is increasing literature being published reflecting institutional results from prospectively collected data, but generally there is no community consensus on accepted guidelines.

This prospective survey was performed as a cross-sectional study of the evaluation and management of rectal prolapse in Australia and New Zealand.

METHODS

A prospective survey was sent to all members of the Colorectal Surgical Society of Australia and New Zealand. This group was selected due to the area of specialization. A survey was mailed out to 202 members of the society asking questions to evaluate the decision making and management surrounding the management of rectal prolapse. Two further reminder surveys were sent out to increase recruitment. Of the 202 members, we received 126 responses (62% response rate).

The survey (appendix A) was constructed with separate sections. Initially a surgeon demographics section provided background on training, place of practice and participant

understanding of rectal prolapse. The Oxford scale for rectal prolapse was used. (Table 1) This was followed by a section on patient evaluation of rectal prolapse. Different clinical scenarios looking at internal and external rectal prolapse, gender and patient morbidity were then presented and preferred surgical approach asked. This was done to elicit whether there were generational differences in practice based on preferred procedure. Colorectal surgeons in practice for greater than ten years (senior) were compared to those of less than 10 years (junior) when looking at treatment preferences, and finally, a section on complications and follow-up.

RESULTS

Participant Demographics: 91.6% of respondents actively perform pelvic floor surgery. Only 21% of respondents had an established multidisciplinary meeting (MDT) in their institution specifically for the management of pelvic

TABLE 1. Classification of rectal prolapse (12).

		Oxford Rectal Prolapse Grade	Radiological characteristics of rectal prolapse
Internal Rectal Prolapse	Recto-rectal	I (low grade)	Descends no lower than the proximal limit of the rectocele
	Intussusception	II (low grade)	Descends into the level of the rectocele, but not onto the sphincter/anal canal
		III (high grade)	Descends onto the sphincter/anal canal
	Recto-anal Intussusception	IV (high grade)	Descends into the sphincter/anal canal
External Rectal Prolapse		V (overt rectal prolapse)	Protrudes from the anus

TABLE 2. Participant Demographics.

Years in Clinical Practice	53 (42%) < 10 years	73 (58%) > 10 years
Years in Pelvic Floor Practice	47 (43%) < 10 years	62 (57%) > 10 years
Specific Pelvic Floor Training	74 (62%) Yes	46 (38%) No
MDT in Practice	23 (21%) Yes	88 (79%) No
Ratio of IRP vs ERP treated in practice	34% IRP	66% ERP

floor disease. Of the respondents without a MDT in their institution, 49% overall liaised with a gynecologist and 46% with a physiotherapist to aide in the management of their patients.

Aetiology: In order to ascertain the community consensus on their understanding of the condition of IRP, three questions were asked. These are represented in Table 3.

Patient Evaluation: Participants were asked about the evaluation of their patients and any tests that were performed. Over 74% of respondents performed defecography, sphincter manometry or endoanal ultrasound in their standard workup prior to a pelvic floor operation. Many respondents also performed a colonoscopy and/or examination under anesthetic. 41% of colorectal surgeons always preceded surgery with biofeedback therapy. 38% occasionally performed biofeedback while 21% seldom/never performed biofeedback therapy.

Treatment: In the treatment of IRP, respondents noted that 60% of their patients had symptoms of obstructed defecation, 22% fecal incontinence while 30% had mixed symptoms. Findings for the preferred treatments are shown in Table 4. Laparoscopic ventral mesh rectopexy is the preferred intervention for healthy female patients. It was noted when looking at treatment preferences and comparing to years of practice, that senior surgeons were five times more likely to perform a laparoscopic resection rectopexy in the treatment of external prolapse than junior surgeons. When treating internal rectal prolapse in healthy females 18-50 years of age, laparoscopic ventral mesh rectopexy was performed twice as often by junior surgeons, while Delorme's procedure was more likely to be performed by senior surgeons (14vs86% RR81%). When looking at the 50-80 year old age group, senior surgeons were three times more likely to perform a laparoscopic resection rectopexy while laparoscopic ventral rectopexy was preferred by junior surgeons

TABLE 4. Preferred Procedure (%).

		Laparoscopic Resection Rectopexy	Laparoscopic suture rectopexy	Laparoscopic ventral (mesh) rectopexy	Laparoscopic posterior (mesh) rectopexy	Delormes Procedure	Altemier's Procedure	STARR Procedure	Other
External Rectal Prolapse	Healthy women 18-50 y.o.	15	12	52	8	8	1	-	10
	Healthy women 50-80 y.o.	12	10	54	7	12	2	-	13
	Healthy men 18-50	12	19	30	11	20	4	-	8
	Health men 50-80	8	19	35	11	18	3	-	10
	Frail and elderly	1	3	13	0	68	16	-	0
Internal Rectal Prolapse	Healthy women 18-50 y.o.	2	4	52	3	14	0	-	26
	Healthy women 50-80 y.o.	4	-	64	-	-	-	4	27
	Healthy men	7	-	36	-	-	-	12	45
	Frail and elderly	1	-	20	-	-	-	9	70

TABLE 3. Surgeon understanding of rectal prolapse.

		Yes	No
Do you believe in the theory that internal rectal prolapse contributes to obstructed defecation?	Grade 1/2	42 (37%)	73 (63%)
	Grade 3/4	93 (80%)	23 (20%)
Do you believe in the theory that internal rectal prolapse contributes to fecal Incontinence?	Grade 1/2	16 (14%)	100 (86%)
	Grade 3/4	82 (70%)	35 (30%)
Do you believe that internal rectal prolapse is a normal functional variant in the majority of patients with:	Grade 1/2	102 (88%)	14 (12%)
	Grade 3/4	32 (28%)	83 (72%)

(60% vs. 40% RR:72%). For fixation, polypropylene mesh was used 48% of the time, while biological mesh was used 52% of the time.

Complications: 32% of respondents noted severe bleeding as a complication from their management of rectal prolapse. Others also commented on hematoma, discitis and pelvic pain. 12% experienced bowel perforation, 11% anastomotic leakage, 8% mesh infection, and 9% erosion.

In the follow-up of their patients 14% of surgeons included a questionnaire as standard, while 6% included radiological imaging in the follow-up of their patients. When asked about current evidence, 60% of respondents believed that high-level research was achievable by means of prospective comparative studies.

DISCUSSION

The results of this study illustrate that as in other countries, the management of patients with rectal prolapse is far from standardized. Most controversy appears to be associated with the significance of the different grades of IRP verses ERP and then its subsequent management⁷.

In the assessment of patients presenting with rectal prolapse, over 74% of respondents performed defecography, sphincter manometry or endoanal ultrasound in their standard workup prior to a pelvic floor operation. Only 9 % utilized dynamic MRI. Due to the multi-organ involvement of pelvic floor pathology, dynamic MRI proves to be a useful

non-invasive tool in the evaluation of selected patients pelvic floor function by combination of novel defecography⁹.

A lot of prospective data has been published of late advocating laparoscopic ventral mesh rectopexy as the treatment of choice for external and symptomatic internal rectal prolapse in both female and male populations^{8,10-13}. Furthermore, the utility of mesh and type of mesh (synthetic versus biological) has also received much attention^{8,10,14}. From the locoregional perspective it can be seen that there is variation in the treatment modalities offered to patients in the treatment of this condition. The majority of respondents preferred laparoscopic ventral mesh rectopexy in the management of healthy female patients between the ages of 18 and 80 with either internal or external rectal prolapse. A perineal approach (Delormes procedure) was preferred by 68% of surgeons in the management of external rectal prolapse for frail and elderly patients. For the same subgroup of patients with internal rectal prolapse, the majority of surgeons preferred either non-operative management or a Delormes approach.

From the survey it is evident that there are varied management options that are offered to these patients.

Currently there are numerous prospective studies published advocating particular techniques. Three prospective trials of note that are being conducted include the PROSPER trial comparing abdominal (rectopexy with or without resection) vs perineal surgery (Delormes vs Altemeier's) and reported no significant differences in any of the randomized comparisons, although substantial improvements from baseline in quality of life were noted following all procedures¹⁵. The DeloRes trial aims to compare Delormes procedure versus resection rectopexy and aims to clarify which procedure results in a smaller recurrence rate but also give information on how morbidity and functional results compare¹⁶. The LaProS study is another trial, which is comparing laparoscopic ventral rectopexy with laparoscopic resection rectopexy primarily looking at improvement of the quality of life in the selected cohort of patients¹⁷.

This survey affirmed that the management of patients with rectal prolapse is far from standardized and that there is uncertainty in the decision making in rectal prolapse treatment. There are noted generational differences with surgeons who have recently (<10years) completed their training preferring laparoscopic ventral mesh rectopexy when suitable and avoiding resection rectopexy. By shedding more light on the debate among surgeons, this survey demonstrates the need for further and more comparative prospective studies to be conducted to demonstrate the benefits of one procedure over the other, prior to the development of guidelines.

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