

A RETROSPECTIVE REVIEW OF PROCTOGRAPHIC FINDINGS IN PATIENTS WITH PELVIC FLOOR DYSFUNCTION

Hypothesis / aims of study

Stretching of the pelvic floor connective tissues may lead to the development of perineal descent, rectal prolapse, rectocele and rectal intussusception. These are commonly reported findings on proctography examinations. They may give rise to symptoms of difficult defaecation and faecal incontinence. Corrective surgery may be offered as a result. Perineal descent is considered to be a sign of connective tissue weakness of the pelvic floor. It is commonly seen in patients with pelvic floor dysfunction but we do not know how it relates to the pathophysiological processes involved. This study aims to explore the relationship between different proctographic findings in patients with pelvic floor dysfunction. We hypothesise that patients with the greatest perineal descent will also have the most advanced grade of rectal intussusception and prolapse and the largest rectoceles.

Study design, materials and methods

Proctography examinations completed in the same institution between January 2008 and March 2011 were included in the study. The examinations were carried out to investigate the symptoms of rectal prolapse, difficult defaecation and faecal incontinence. The proctograms were reviewed by a single researcher on one occasion. The researcher was blinded to the clinical diagnoses of the patients. The images were reviewed using Picture Archiving and Communications System software (Centricity, GE Healthcare, UK.) The following findings were recorded; anorectal angle, perineal descent, presence and size of rectocele, presence and grade of rectal prolapse or intussusception and presence of other pathology e.g. enterocele or lateral rectocele.

To measure perineal descent the anorectal angle was used to represent the level of the pelvic floor and the top of the examination table seat was used as a consistent landmark. The vertical distance between the anorectal angle and the top of the seat was measured at rest and on straining. The perineal descent is the difference between the two measurements. A magnification factor was applied to all measurements to compensate for the use of fluoroscopy. The depth of the rectocele was measured on the image of maximum straining in the anterior-posterior dimension. A vertical line was drawn parallel to the anal canal posteriorly; a perpendicular line was drawn horizontally from this point to the apex of the rectocele anteriorly. The degree of intussusception was graded using the five classifications of the Oxford Radiological Grading of Rectal Prolapse system (1.)

Results

Data analysis was performed using SPSS® for Windows version 16.0 (SPSS Inc, Chicago, IL.) The proctograms of 95 patients (92 female) were reviewed. The anorectal angle was measured in 93 cases; the range was 70 to 170 degrees. A rectocele was present in 81 cases (all female) and a degree of rectal intussusception or prolapse was present in 36 cases. In addition to the above findings 14 patients also had an enterocele and 7 patients had a lateral rectocele.

Table 1. Grade of Rectal Intussusception by Frequency

Frequency of cases (n=95)	Grade of Intussusception					Rectal Prolapse
	Nil	I	II	III	IV	V
	59	3	13	6	11	3

In order to explore the relationship between perineal descent and other proctographic findings the patients were divided into five groups according to the degree of perineal descent.

Table 2. Perineal Descent and Grade of Rectal Intussusception / Prolapse

Perineal Descent (cm)	Grade of Rectal Intussusception					Rectal Prolapse
	Nil	I	II	III	IV	V
0-0.5 (n=32)	20 (62.5%)	0	4 (12.5%)	2 (6.3%)	5 (15.6%)	1 (3.1%)
0.5-1.0 (n=23)	14 (60.9%)	2 (8.7%)	4 (17.4%)	0	2 (8.7%)	1 (4.3%)
1.0-1.5 (n=30)	20 (66.7%)	0	4 (13.3%)	4 (13.3%)	2 (6.7%)	0
1.5-2.0 (n=7)	3 (42.9%)	1 (14.3%)	1 (14.3%)	0	2 (28.5%)	0
2.0-3.0 (n=3)	2 (66.7%)	0	0	0	0	1 (33.3%)

Table 3. Perineal Descent and Size of Rectocele

Perineal Descent (cm)	Size of Rectocele (cm)		
	0-2.0	2.0-4.0	>4.0
0-0.5 (n=27)	18 (66.7%)	9 (33.3%)	0
0.5-1.0 (n=21)	15 (71.4%)	6 (28.6%)	0
1.0-1.5 (n=26)	14 (53.8%)	12 (46.2%)	0
1.5-2.0 (n=5)	1 (20%)	3 (60%)	1 (20%)
2.0-3.0 (n=2)	0	2 (100%)	0

Interpretation of results

Rectocele and rectal intussusception / prolapse are common proctographic findings (85.3% and 37.9% respectively.) Patients with the greatest degree of perineal descent do not have the most significant intussusception / prolapse or the largest rectoceles. A Spearman rank correlation did not demonstrate a positive correlation between degree of perineal descent and size of rectocele (correlation coefficient 0.21, p=0.06) or degree of perineal descent and grade of intussusception (correlation coefficient -0.06, p=0.75.)

Concluding message

This study does not show a positive correlation between degree of perineal descent and other proctographic findings suggestive of connective tissue weakness. Future work will explore the clinical significance of these proctographic findings using patient symptom questionnaires.

References

1. Collinson, R., et al., Rectal intussusception and unexplained faecal incontinence: findings of a proctographic study. Colorectal Dis, 2009. 11(1): p. 77-83

<i>Specify source of funding or grant</i>	No funding required.
<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	NONE