Defaecating Proctogram in the Evaluation of Posterior Vaginal Wall Prolapse Presenting with Ano-rectal Symptoms

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Abstract

Introduction: Posterior vaginal wall prolapse (rectocele and enterocele) may be associated with problems with defaecation. Surgical correction of the prolapse may just treat the anatomical defect, but not treat the underlying bowel problems. This study aims to evaluate the use of defaecating proctography in the evaluation of such cases and subsequent change in their management. Methods: All the women who presented to the department of urogynaecology with posterior vaginal wall prolapse and bowel symptoms underwent a defaecating proctography. They were subsequently managed in close liaison with the department of colorectal surgery and physiotherapy. Results: 28 Patients underwent defaecating proctography. Average age of patients was 51 and all the women had had at least one vaginal delivery. Following symptoms were noted: constipation (15; 53%), incontinence to flatus or stools (3; 10%), Digitation to empty bowels (21; 75%) and difficulty in defaecation (5; 17%). First-degree prolapse was noted in 2(7%), second-degree prolapse was noted in 19(68%) and 7(25%) had third degree prolapse. Defaecating proctography revealed rectocele (5; 18%), Intususception (7; 25%), Sphincter abnormality (9; 32%) and rectal prolapse (3; 11%). Posterior repair was done in 13 patients (46%). 9 patients (32%) were referred for biofeedback and physiotherapy for sphincter problems. Rectopexy was done in 5 patients (18%), whilst, sacrocolpopexy was done in 1. 3 patients preferred to defer treatment and 2 patients were referred further for complex anorectal problems. Conclusion: Defaecating proctography is an important investigation available to urogynaecologists in the management of complex pelvic floor management and its effective use is appropriate in current practice.

KEYWORDS: Defecating proctography, posterior vaginal wall prolapse, rectocele, enterocele, digitation to defecate
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**Abstract:**

**Introduction:**

Posterior vaginal wall prolapse (rectocele and enterocele) may be associated with problems with defaecation. Surgical correction of the prolapse may just treat the anatomical defect, but not treat the underlying bowel problems. This study aims to evaluate the use of defaecating proctography in the evaluation of such cases and subsequent change in their management.

**Methods:**

All the women who presented to the department of urogynaecology with posterior vaginal wall prolapse and bowel symptoms underwent a defaecating proctography. They were subsequently managed in close liaison with the department of colorectal surgery and physiotherapy.

**Results:**

28 Patients underwent defaecating proctography. Average age of patients was 51 and all the women had had at least one vaginal delivery. Following symptoms were noted: constipation (15; 53%), incontinence to flatus or stools (3; 10%), Digitation to empty bowels (21; 75%) and difficulty in defaecation (5; 17%). First-degree prolapse was noted in 2(7%), second-degree prolapse was noted in 19(68%) and 7(25%) had third degree prolapse. Defaecating proctography revealed rectocele (5; 18%), Intususception (7; 25%), Sphincter abnormality (9; 32%) and rectal prolapse (3; 11%).

Posterior repair was done in 13 patients (46%). 9 patients (32%) were referred for biofeedback and physiotherapy for sphincter problems. Rectopexy was done in 5
patients (18%), whilst, sacrocolpopexy was done in 1. 3 patients preferred to defer treatment and 2 patients were referred further for complex anorectal problems.

Conclusion:
Defaecating proctography is an important investigation available to urogynaecologists in the management of complex pelvic floor management and its effective use is appropriate in current practice.

Introduction
Management of women with pelvic dysfunction (prolapse) and ano-rectal dysfunction is often difficult (1). Defecating proctography (DP) has evolved as a useful investigation in evaluating women with defecation problems (especially obstructed defecation), which could be associated with other pelvic floor disorders (1) (2). DP reveals the process of rectal evacuation and demonstrates disorders of defecation (2). DP has a high observer accuracy and yield of positive diagnosis (1). DP provides an objective assessment of recto-enteroceles, intussusception, rectal prolapse and spastic pelvic floor, which can be missed on clinical examination (3) (4) (5). It is considered as the gold standard investigation for the identification and staging of morphological and functional disorders of the ano-rectal region and pelvic floor in evacuation dysfunction (6). Correlation between radiological findings and clinical examination varies and it is important to infer the results by physical examination (4). DP helps in more accurate assessment and reduces the incidence of operative failure (7). DP thus helps in planning the most appropriate management of women with prolapse and ano-rectal symptoms (8) (9) (10).
This study was done to evaluate the usefulness of DP in the management of women with pelvic floor prolapse with associated anorectal symptoms.

Methods

The study was conducted at Peterborough City Hospital, Peterborough, UK. 28 patients who underwent DP were included in this study. Ethical approval was not deemed necessary as this study was evaluating the results of a test. All the patients were referred to the urogynaecology department by their general practitioners with prolapse. One consultant urogynaecologist saw them all. A careful history was taken and the patients were subsequently examined. All patients had some anorectal symptoms along with a history of something coming out of the vagina. Anorectal symptoms included constipation, incontinence and digitation of prolapse to evacuate stools. All the patients were examined in Sim’s position to ascertain the degree of prolapse on Valsalva manoeuvre. Degree of prolapse was recorded as per Baden and Walker system of classification. Patients with pelvic organ prolapse and anorectal symptoms were then referred for DP. They were subsequently managed in close liaison with the department of colorectal surgery and physiotherapy. Patients were subsequently managed depending on the results of the DP. Results of the tests were analysed to understand the change in management.

Results

A total of 28 patients were identified from history and clinical examination. They were referred for DP. The average age of patients was 51. All the women had delivered by vaginal deliveries. They presented with a history of something coming out of vagina. Nearly half of all women complained of constipation (15, 53%). 3 women complained
of incontinence to either flatus or stools. Three-quarters of women (21) had to manually digitate the vagina to empty the bowels completely. 5 women complained of difficulty with defecation (17%).

Clinical examination revealed a first-degree prolapse in 2(7%). Majority of women (19, 68%) had second degree, whilst a quarter had a third degree prolapse (7). Results of DP revealed rectal prolapse in 13% cases, rectocele in 21%, intussusception in 29% and sphincter dysfunction in 37% cases. (Fig 1.)

Nearly half of them (13, 46%) underwent a posterior repair. One-third patients (9, 32%) were referred for biofeedback and physiotherapy. 5 patients (18%) had rectopexy. Sacrocolpopexy was done in one patient. 3 patients preferred to defer treatment and 2 patients were referred further for complex anorectal problems. (Fig. 2) Women were seen in clinic for follow up and subjective improvements were noted. Validated quality of life questionnaires and POPQ were not used.

**Discussion**

This study was done to evaluate the results of DP and its usefulness in managing pelvic organ prolapse. The selection of cases was based on history and examination. All women with posterior vaginal wall and associated ano-rectal symptoms were referred for DP. Ano-rectal symptoms included constipation, difficulty to evacuate bowels completely, digitation to empty bowels and incontinence. 93% of patients in our study had a major degree prolapse (2\(^{nd} / 3^{rd}\) degree prolapse). Symptoms in women with pelvic organ prolapse may not necessarily correlate with the specific compartment, but increasing severity of prolapse may be associated with various
symptoms (11). Symptoms of defecatory dysfunction like incomplete evacuation and digital manipulation may be associated with worsening posterior vaginal wall prolapse (11).

The most common finding on DP was sphincter dysfunction (37%); followed by intussusception (29%), rectocele (21%) and rectal prolapse (13%). DP helped in identifying these underlying conditions, thus adding valuable information to findings, which were missed on clinical examination. Evaluating the process of rectal evacuation, thus helped to demonstrate defecatory dysfunction (2). DP provides information on the size of the rectocele, rectal intussusception and rectal prolapse (3) (4). This information is valuable in planning the most appropriate management option (8).

Patients were managed based on the information from DP and in close liaison with physiotherapists and colorectal surgeons. 46% of our patient underwent a posterior repair. One-third of our patients avoided surgery and benefitted from biofeedback and physiotherapy. Five patients had rectopexy, whilst one patient has sacrocolpopexy. Three patients deferred treatment and two patients had to be referred to a higher centre for further treatment. Just over half of patients needed treatment options other than a traditional posterior repair. Results of DP were influential in adding valuable information in making these decisions.

DP is particularly useful in investigating patients with defecation disorders, especially with obstructive symptoms or incontinence. (2) A review of literature reveal a predominance of studies confirming its usefulness in clinical management, whilst
some papers questioning its validity (1-10). Jones et. al. (9) concluded DP as a valuable adjunct in the diagnosis of functional ano-rectal dysfunction and also suggested DP as a useful test in providing a diagnosis in women with prolapse and associated ano-rectal symptoms. Kelvin et. al. (3) advocated that gynecologists managing pelvic floor disorders should assess coexistent ano-rectal dysfunction. They concluded that conditions like undiagnosed enteroceles and defecatory disorders as an important cause for persistent or recurrent symptoms after pelvic floor repair and advocated DP as an investigation of choice to evaluate them (3). Some investigators (2) have found a minor role of DP in routine clinical practice, but have acknowledged its use a useful test in clinical research of defecatory disorders.

Management of women with prolapse and ano-rectal symptoms is complex and can be difficult. DP is of major benefit to clinicians and can alter management from surgical to conservative and vice-versa in a significant number of cases (1). A comprehensive multidisciplinary approach is recommended in managing these complex cases (3). It is an important investigation for the identification and staging of morphological and functional disorders of the recto-anal region and pelvic floor in evacuation dysfunctions (6). It adds invaluable information to the clinical findings. Care must be taken not to treat patients strictly on radiological findings, but to correlate findings with clinical findings, before suggesting treatment options (5). The findings do seem to help reduce the risk of operative failure (8). It helps to decide on the components of pelvic reconstructive surgery and the route (vaginal or abdominal) and the specialist required to treat (8) (12) (13).
Tests like dynamic MRI (14) and translabial ultrasound (15) could also be used in evaluating bowel and pelvic flood dysfunction. These modalities may be better tolerated, but cost and lack of expertise may be a limiting factor. Only subjective patient responses were noted and validated quality of life questionnaires were not used, which is an area of weakness in this paper. Due to the small number of cases it is difficult to draw valid conclusions. The study however, highlights the important role of DP in investigating women with prolapse and ano-rectal symptoms. It not only identifies anatomical and functional problems, but also helps in deciding the appropriate management. Larger studies are needed to draw further conclusions on the utility of DP in evaluating women with pelvic dysfunction.

**Conclusion**

We conclude that DP is a useful investigative test in evaluating women with pelvic organ prolapse and associated ano-rectal problems. It not only confirms clinical findings, but may also show other associated pathology that may change the management of patients. It may help in avoiding major surgery and a significant proportion of women could be managed conservatively. It may also reduce the risk of persistent symptoms post-operatively. Further research is needed to correctly identify women for further testing and to evaluate the usefulness of DP.

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Declaration of interest

The authors report no relevant declarations of interest.

References:


Fig. 1: Results of Defecating Proctogram (DP)

- Rectocele, 5, 21%
- Intussusception, 7, 29%
- Sphincter dysfunction, 9, 37%
- Rectal Prolapse, 3, 13%

Fig. 2: Management of patients

- Posterior repair, 13, 40%
- Biofeedback / Physiotherapy, 9, 27%
- Rectopexy, 5, 15%
- Sacrocolpopexy, 1, 3%
- Tertiary Referral, 2, 6%
- Deferred Treatment, 3, 9%