

Original Article

The Use of the Tampon Test in Preoperative Assessment of Women with Rectocele

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Key Words

Rectocele;

Constipation;

Dyschezia;

Defecography;

Tampon test

Purpose. This study was undertaken to investigate whether a tampon test, in preoperative assessment, could be used to predict the improvement in functional result after endorectal rectocele repair.

Patients and Methods. Studies were carried out at Cathay General Hospital, Taipei, from 2004 to 2010. Thirty-four patients with positive tampon tests, age between 28 and 67 years (mean: 54.1), with specific defecation difficulties received endorectal rectocele repair.

Results. After one year of follow up: 21 patients (61.8%) had excellent result; 11 patients (32.4%) had good result and 2 patients (5.9%) had poor result. After correlation to the patients menstrual status we found that group one with excellent result consisted of patients in their menopausal and perimenopausal status while group two patients with good result even though resorted to stimulant laxative to affect their bowel movement during their ovulation phase (premenstrual). Group three patients with poor response had irregular, often delay, menstrual cycle; menstrual flow were often scanty and prolonged.

Conclusion. The use of the tampon test in preoperative assessment of women with rectocele can predict good to excellent response to endorectal rectocele repair in 94.1% of our patients. Poor response noted in patients with abnormal menstrual cycle and warrant guarded surgical outcome.

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A rectocele is the descent of the distal posterior vaginal wall and the subjacent rectum typically develop between the levator plate and the perineal body, usually a result of weakness of the rectovaginal septum endopelvic fascia due to fascial tears that occurred superiorly or inferiorly at sites of attachment to the central tendon.¹ It is more commonly seen in Whites with the incidence increases with advancing age.

Straining to defecate, repeated childbirth, prolonged and difficult labor, injuries of the rectovaginal

septum, pelvic floor, inadequate repair of pelvic floor injuries, and inadequate strengthening of the posterior vaginal wall after a vaginal hysterectomy, may play a putative mechanical role in the etiology of rectocele. A rectocele causes functional symptoms of outlet obstruction type of constipation with incomplete emptying sensation, dyschezia, and manual evacuation. During DRE the rectocele can be elevated by a finger in the rectum.

Clinically, it may be classified into mild, moderate, or severe: first degree, a slight bulge in vaginal

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wall; second degree, a bulge of mucosa that brings the vaginal wall to the introitus; and third degree, the bulge prolapses through the introitus. Although both impaired defecation and the anatomic finding of a rectocele are common findings, the relationship between the two remains poorly defined. Rectoceles are often found in otherwise asymptomatic patients. Correction of rectoceles as part of the surgical treatment of impaired defecation does not always improve symptoms.² Furthermore, whether or not the size of the rectocele influences surgical outcome is not clear. Therapeutic considerations include a decision making whether to treat a patient expectantly or surgically depends on the patient’s symptomatology. The goals of rectocele repair are to restore functionality and to relieve symptoms.

This prospective study was undertaken in order to investigate whether a “tampon test”, in preoperative assessment, could be used to predict the improvement in functional result after endorectal rectocele repair.

Patients and Methods

Algorithm for managing patient with rectocele: Fig. 1.

Tampon test

The patient was instructed to insert a regular-size tampon into the vagina prior to defecation and note any subjective improvement of defecation difficulties. A positive test is indicative of improvement. The in-

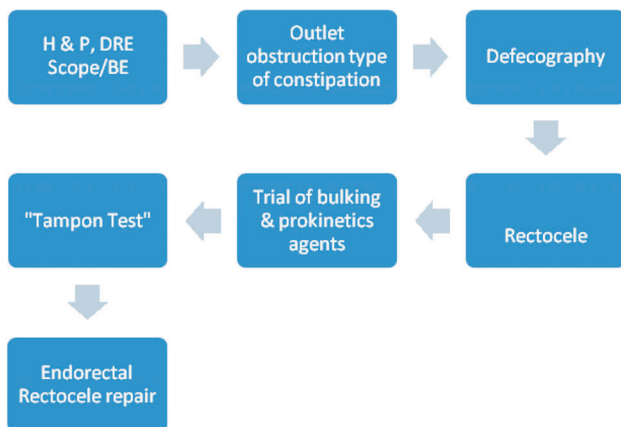


Fig. 1. Algorithm for managing patient with rectocele.

serted tampon, simulating a vaginal pessary, thus functions as a strut to the weakened rectovaginal septal fascia. (Fig. 2)

Endorectal rectocele repair technique

The patient was placed in prone Jackknife position. An extra-large Ferguson-Moon retractor was placed in the anal canal. A longitudinal incision was made bilaterally, extending from the perianal tissue orad to the normal rectal mucosa. A semicircular incision was made anteriorly at the dentate line until the two longitudinal incisions join. The distal cut edge of the rectal mucosa and the internal hemorrhoids were reflected outward. The anterior proximal rectal mucosa was mobilized from the muscularis propria by sharp dissection to expose the deep anterior rectocele and the exposed rectocele was then obliterated by plicating the anal sphincter using 3-0 vicryl sutures, which were, placed 1 cm apart, working from the outside inward. Approximately six interrupted sutures in the anal sphincter were placed to obliterate the rectocele. The redundant rectal mucosa and the hemorrhoids were excised. Before the skin flap was sutured to the cut edge of the rectal mucosal with interrupted 3-0 chromic catgut, thus established the newly formed anorectal line at its proper anatomic position.

Studies were carried out at Cathay General Hospital, Taipei, from 2004 to 2010. Thirty-four patients with positive tampon tests, age between 28 and 67 years (mean 54.1), with specific defecation difficulties including straining with defecation, sensation of incomplete rectal emptying, and DRE revealed that the rectocele can be elevated by a finger in the rectum. All patients were continent and had at least three

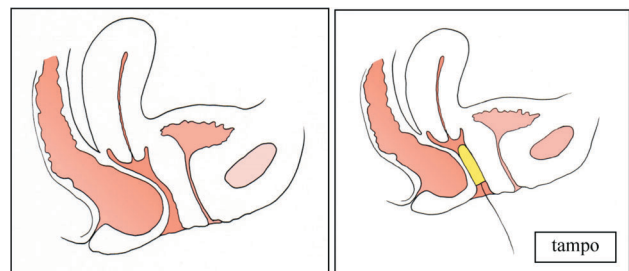


Fig. 2. Diagrammatic illustration of rectocele during straining and with a tampon in position as an anterior strut to the weakened rectovaginal septal fascia.

bowel movements each week. None of them experienced anorectal pain, but most of them had history of manual perianal support or rectal digitation during defecation and frequent enema use. All had defecography done with rectocele visualized as the possible main culprit for their defecation difficulty. Rectocele patients with other defecographic demonstrated abnormalities, i.e. enterocele, internal procidentia, and anismus were excluded. Patient with hypothyroidism was also excluded from this study. Detailed menstrual history was elicited and documented. Patients were grouped into three groups of postoperative responses after follow up to one year. Group one: excellent; with disappearance of preoperative defecation difficulty symptoms but occasional required bulking agent. Group two: good; with disappearance of preoperative defecation difficulty symptoms but aside from frequent bulking agent requirement also necessitate occasional stimulant laxative use. Group three: persisting stimulant laxative requirement for normal bowel movement.

Results

Group one consisted of 21 patients (61.8%); group two consisted of 11 patients (32.4%); and group three consisted of 2 patients (5.9%). After correlation to the patients menstrual status we found that group one consisted of patients in their menopausal and perimenopausal status while group two and three consisted of premenopausal patients. Group two patients resorted to stimulant laxative to affect their bowel movement during their ovulation phase (premenstrual). Group three patients had irregular, often delay, menstrual cycle; menstrual flow were often scanty and prolonged.

Discussion

Disturbances in defecation are common clinical problems. Defecography has been used as a diagnostic procedure since 1968.³ It is a relatively simple and rapid examination and one that offers an excellent documentation of the morphology and dynamic as-

pects of the pelvirectum during defecation. It can also be used as a method of investigation for numerous defecation disorders including unremitting constipation, incomplete rectal emptying, incontinence and anorectal pain.⁴ It is at this time probably the only objective means of measurements of anorectal anatomy and function. Etiology of rectocele appears to be multifactorial.⁵ It is difficult to determine whether defecographic findings are the cause or result of excessive straining in patients with obstructed defecation which makes the ultimate therapeutic decision a difficult task.⁶ Another problem in the defecographic analysis of patients with rectocele is the fact that abnormal defecographic features can also be found in asymptomatic individuals.⁷ Since pessary test has been use in preoperative assessment of women with severe genital prolapse.⁸ We prospectively study whether a "tampon test", with the rational that the tampon should act as a strut to the weakened rectovaginal septum thus simulating the endorectal rectocele repair result, would be predictive of good surgical prognosis.

A positive "tampon test" failed in predicting approximately 6% of the patient with endorectal rectocele repair. Detailed menstrual history needs to be taken into account as such patients with abnormal menstrual cycle should not be offered endorectal rectocele repair.

References

1. Mollen RM, van Larrhoven CJ, Kuijpers JH. Pathogenesis and management of rectoceles. *Semin Colon Rectal Surg* 1996;7:192-6.
2. Karlbom U, Graf W, Nilsson S, Pahlman L. Does surgical repair of a rectocele improve rectal emptying? *Dis Colon Rectum* 1996;39:1296-302.
3. Broden B, Snellman B. Procidentia of the rectum studied with cineradiography: a contribution to the discussion of causative mechanism. *Dis Colon Rectum* 1968;11:330-47.
4. Faccioli N, Comai A, Mainardi P, Simone Perandini, Farah Moore, Roberto Pozzi-Mucelli. Defecography: a practical approach. *Dign Interv Radiol* 2010;16:209-16.
5. Pitchford CA. Rectocele: a cause of anorectal pathologic changes in women. *Dis Colon Rectum* 1967;10:464-6.
6. Van Dam JH, Ginai AZ, Gosselink WJ, Huisman WM, Bonjer HJ, Hop WCJ, Schouten WR. Role of defecography in predicting clinical outcome of rectocele repair. *Dis Colon Rectum* 1977;40:201-7.

7. Shorvon PJ, McHugh S, Diamant NE, Somers S, Stevenson GW. Defecography in normal volunteers: results and implications. *Gut* 1989;30:1737-49.
8. Liapis A, Bakas P, Georgantopoulou C, Creatsas G. The use

of the pessary test in preoperative assessment of women with severe genital prolapse. *European Journal of Obstetrics & Gynecology and Reproductive Biology* 2011;155:110-3.

原 著

在患有直腸前突的女性病人，於術前使用 陰道綿條測試評估術後成果

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目的 這項研究是在評估術前使用陰道棉條測試是否可以用來預測經直腸修補直腸前突術後的成效。

病人與方法 從 2004 年到 2010 年在台北國泰綜合醫院，共有三十四位病人，年齡 28 至 67 歲 (平均：54.1 歲)，在接受經直腸修補直腸前突手術之前，先做陰道棉條測試。

結果 經過至少一年的追蹤發現：21 例 (61.8%) 有良好術後成果，11 例 (32.4%) 有較好術後的效果，2 例 (5.9%) 症狀未改善。在與病人的經期關係上，我們發現第一群的停經病人，皆有非常好的反應；但是第二群的未停經病人在排卵期，需要使用瀉劑來刺激腸道蠕動，才能達到好的反應。效果較差的第三群病人，她們的經期是延遲而且不規則的。

結論 在術前對於直腸前突的女性病人，94.1% 的病人使用陰道綿條測試，可以預測病人在接受經直腸做直腸前突修補手術後，是否能達到良好或是非常好的效果。在經期不規則的病人，即使術前通過陰道綿條測試，術後仍可能有較差的效果，這也表示這群術前陰道綿條測試陽性病人應避免建議做經直腸直腸前突修補手術。

關鍵詞 直腸前突、便秘、排便困難、排便攝影、陰道綿條測試。