Endorectal Repair of Rectocele

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The aim of the study was to evaluate results of endorectal repair pf rectocele at the Colorectal Unit of the Surgical Department of Vilnius Center University Hospital.

Materials and methods. Over a period of 13 months (April 2001 to May 2002), 6 females were operated on for rectocele. Their age ranged from 51 to 76 years, mean 64 years. All patients initially presented at the outpatient clinic with the dominating symptom of obstructed defecation. All patients preoperatively underwent clinical examination, digital examination, proctoscopy, barium enema examination and defecography. The diagnosis was confirmed by defecography in all cases. All patients were operated on in the same endorectal fashion.

Results. There was no morbidity and mortality. In-hospital stay ranged from 3 to 8 days, on an average 5 days. Five (83.3%) patients noted a total disappearance of the symptoms of obstructed defecation, and one (16.7%) noted a significant improvement. All patients underwent clinical evaluation and digital examination at the day of discharge from the hospital and 2 months after surgery. All were satisfied with the procedure, and digitally signs of rectocele were absent postoperatively in all cases.

Conclusion. Endorectal repair of rectocele has been an effective and safe method for symptomatic and anatomical control of this disorder and deserves more attention of colorectal surgeons in Lithuania, both as a means of treating defecation disorders and as a morphological substrate for surgery at colorectal units.

Key words: rectocele, rectocele repair, rectovaginal fascia, endorectal repair, obstructed defecation

INTRODUCTION

It is generally agreed that the cause of rectocele is a defect in the rectovaginal fascia, and is very common in multiparous women. The rectovaginal fascia is basically like Denovillier's fascia, which is a fibromuscular layer composed of an elastic layer of dense collagen, abundant smooth muscle and coarse elastic fibers. It is found between the rectum and the vagina or a layer which is attached to the perineal body inferiorly, to the levator ani muscles at the arcus tendinea levator ani laterally and to the uterosacral ligaments superiorly. In 1839, Denovilliers first described a layer of fascia found in men and named it a rectovesical septum. This septum was later well documented by Milley and Nichols (1) in women. Richardson (2) came up with a very detailed description: he thinks that rectocele is caused by a variety of breaks in the fascia. In his opinion, the most common brake was transverse separation above the attachment to the perineal body, resulting in a low rectocele. Another common fascial break is explained as a result of obstetric tear or an improperly repaired epiphysiotomy, and this is located at the midline and invloves the lower vagina and may extend to the vaginal apex. Less commonly, a break might be a result of lateral separation on the sides of the fascia.

Usually, the rectocele becomes symptomatic only in women over 40 years of age. The brake in the rectovaginal fascia had probably been present years before, but became symptomatic due to progressive weakening of the supportive tissues as part of the aging process. During defecation, the apex of the rectocele moves downwards and frontwards. Stool becomes trapped in the rectocele, and excessive straining simply potentiates the problem of compromised evacuation of the stool. This problem usualy is solved by putting a finger into the vagina and pressing it against the posterior wall. Urge for defecation is usually unaltered. Other symptoms include rectal fulness, incomplete evacuation, protrusion (vaginal mass), pain, bleeding and soiling.

The two main surgical methods for rectocele correction used by gynaecologists are: traditional repair of colpoperineorrhaphy, as a rule with levator ani plication, and site-specific or defect-specific repair. The main goals are to relieve symptoms, to restore anatomy, to maintain or restore the visceral and sexual function, not causing dyspareunia. Even though, according to some authors, transvaginal repair does not provide sufficient relief (3–6).

This study is aimed to present recent personal experience in endorectal repair of rectocele.

MATERIALS AND METHODS

Over a 13 month period, April 2001 to May 2002, 6 females were operated on at the Colorectal Unit of the Surgical Department for rectocele. Their age ranged 51 to 76 years, mean 64 years. All patients initially presented at the outpatient clinic with the dominating symptom of obstructed defecation and a need of digital support from the vaginal side to achieve evacuation of stools. Other symptoms included protrusion in all cases, constipation in 3, incomplete emptying in 5, rectal fullness in 5 and soiling in one case. All patients preoperatively underwent clinical evaluation, digital examination, proctoscopy, barium enema examination and defecography. The diagnosis was confirmed by defecography in all cases (Figs. 1 and 2). All patients were operated on in the same endorectal fashion.

Preoperatively, a colonic lavage with Fortrans was achieved. No routine antibiotic prophylaxis was used. Patients were operated on under spinal or epidural anesthesia. For the operation, the patient was placed in a prone-jacknife position. After the insertion of a Mathieau speculum into the anus, the anterior rectal wall was exposed. With the finger inserted into the vagina, the true borders of the rectocele

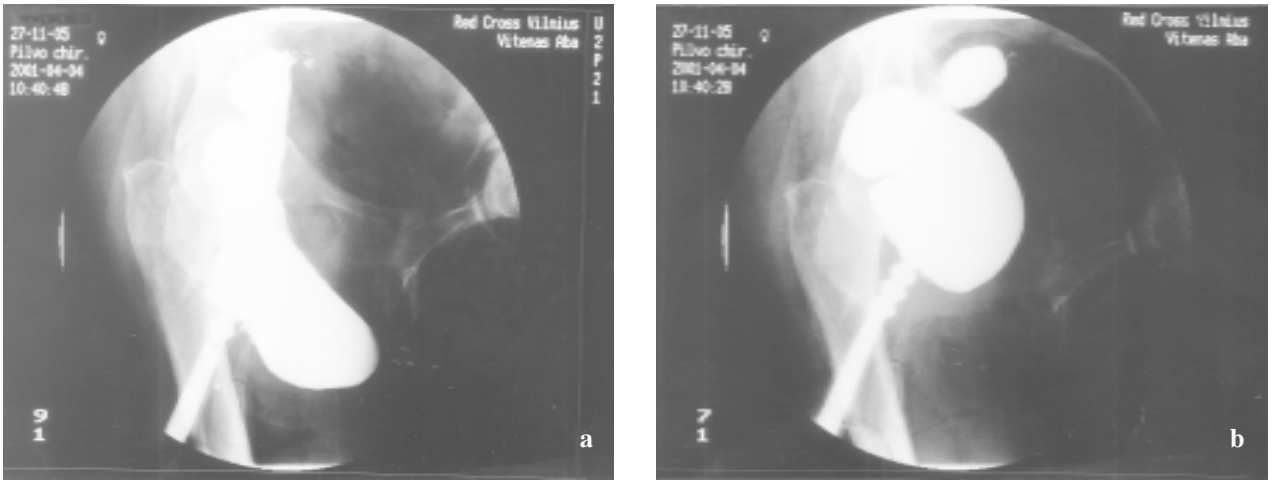

Fig. 1. Defecography of the patient U. S., age 73 years

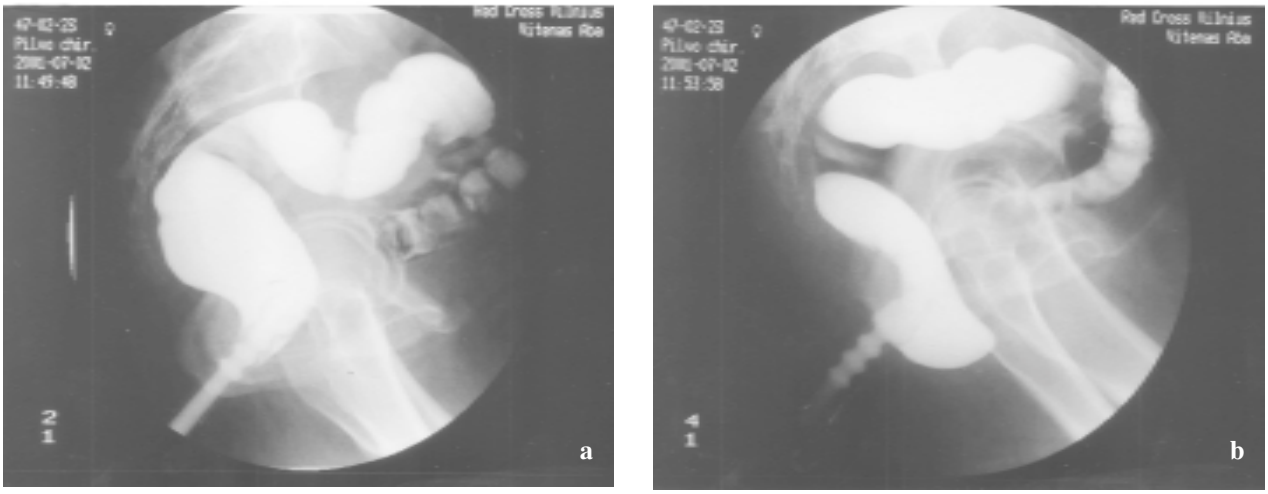

Fig. 2. Defecography of the patient K. J., age 54 years

were delineated. Starting from 1 cm above the dentate line, after submucosal infiltration of up to 20 ml of 1:200000 of adrenaline solution in saline, the mucosal flap in the whole area of rectocele was elevated and excised; a careful haemostasis was made. With the one row of interrupted vicryl 2.0 sutures, bowel wall continuity was restored with horizontal plication of the denudated musculofascial layer. No rectal packing was used. The patients were allowed a liquid diet on the next day and unrestricted food intake since the second postoperative day.

RESULTS

There was no morbidity and mortality. In-hospital stay ranged from 3 to 8 days, on an average 5 days. Five (83.3%) patients noted disappearance of the symptoms of obstructed defecation and need of vaginal digital support, and one (16.7%) noted a significant improvement. Constipation was still present in the same three patients, but none was complaining or rectal fulness, incomplete evacuation, protrusion or soiling. Dyspareunia did not occur in any of the 6 patients. All patients underwent clinical evaluation and digital examination on the day of discharge from the hospital and 2 months after surgery. All were satisfied with the procedure, and digitally signs of rectocele were absent postoperatively in all cases.

DISCUSSION

Which surgical method is the best for the repair of rectocele is still a matter of debate. Traditional gynaecological approach towards rectocele repair focuses mostly on the buldging of the vagina. The increase of sexual dysfunction after posterior colporrhaphy (7) presumably relates to the failure of reestablishing a normal vaginal anatomy. Plication of the levator muscles creates a firm shelf between the rectum and the vagina, which is believed to be a reason of postoperative dyspareunia. A combination of the levator ani plication with perineorrhaphy decreases the genital hiatus and creates an abnormally long perineal body which adds to coital discomfort. The ballooning of the anterior rectal wall is not corrected, but simply hidden. The success of the transrectal repair of the rectocele could be explained by the elimination of redundant rectal mucosa and correction of the anatomical defect in the rectovaginal fascia, leading to a symtomatic improvement. The insignificant variations of transrectal techniques, a success rate of up to 80–90% are reported to be achieved (8–12). However, it should be also noted that defect-specific or discrete defective rectocele repair via transvaginal approach in more recent studies has gained reputation as functionally successul with a low risk of dyspareunia (13–15). Apart from relieving constipation, the transperineal or transanal approach to rectocele might improve the symptoms of incontinence in patients complaining of it, as pointed out recently by Ayabaca et al. (16). An interesting observation has been brought into light by Van Laarhoven and coauthors (17): the reduction of the size of rectocele after surgery (transperineal or transanal) did not correlate directly with symptomatic improvement, and it was postulated that at least in part symptomatic improvement is due to other factors than dimensions of the rectocele. On a long run, the symptomatic improvement of rectocele repair seems to be sustained (18).

Our group of patients was very small and the postoperative time was short, even though the results seem to be very promising.

CONCLUSION

Endorectal repair of rectocele has been an effective and safe method for symptomatic and anatomical control of this disorder and deserves more attention of colorectal surgeons in Lithuania, both as a means of eliminating defecation disorders and as a morphological substrate for surgery at colorectal units.

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References

1. Milley PS, Nichols DH. A correlative investigation of the human rectovaginal septum. Anat Rec 1969; 163: 443–52.
2. Richardson AC. The rectovaginal septum revised: its relationship and its importance to rectocele repair. Clin Obstet Gynecol 1993; 36:9 76–83.
3. Capps WF. Rectoplasty and perineoplasty for the symptomatic rectocele repair. A report of fifty cases. Dis Colon Rectum 1975; 18: 237–43.
4. Marks M. The rectal side of rectocele. Dis Colon Rectum 1967; 10: 387–8.
5. Sehapayak S. Transrectal repair of rectocele: an extended armamentarium for colorectal surgeons. Dis Colon Rectum 1985; 28: 422–33.
6. Sullivan ES, Leaverton GH, Hardwick CE. Transrectal perineal repair: an adjunct to improved function after anorectal surgery. Dis Colon Rectum 1968; 11: 106–14.
7. Kahn MA, Stanton SL. Posterior colporrhaphy: its effects on bowel and sexual function. Br J Obstet Gynaecol 1997; 104: 659–61.
8. Sullivan ES, Leaverton GH, Hardwick CE. Transrectal perineal repair: an adjunct to improved function after anorectal surgery. Dis Colon Rectum 1968; 11: 196–14.
9. Sehapayak S. Transrectal repair of rectocele: an extended armamentarium for colorectal surgeons; a

report of 355 cases. Dis Colon Rectum 1985; 28: 422–33.
10. Block IR. Transrectal repair of rectocele using obliterative suture. Dis Colon Rectum 1986; 29: 707–11.
11. Sarles JC, Arnaud A, Selezneff I, Olivier S. Endorectal repair of rectocele. Int J Colorect Dis 1989; 4: 167–71.
12. Khubchandani AT, Clancy JP, Rosen L, Riether RD, Stasik JT. Endorectal repair of rectocele revisited. Br J Surg 1997; 84: 89–91.
13. Cundiff GW, Weidner AC, Visco AG, Anthony G, Addison WA, Bumpr RC. An anatomical and functional assessment of the discrete defect rectocele repair. Am J Obstet Gynec 1998; 179(6): 1451–7.
14. Porter WE, Steele A, Walsh P, Kohli N, Karram MM. The anatomic and functional outcomes of defect-specific rectocele repairs. Am J Obstet Gynec 1999; 181(6): 1353–8.
15. Glavind K, Madsen H. A prospective study on discrete fascial defect rectocele repair. Acta Obstetrica et Gynecologica Scandinavica 2000; 79(2): 145–7.
16. Ayabaca SM, Zbar AP, Pescatori M. Anal continence after rectocele repair. Dis Colon Rectum 2002; 45(1): 63–9.
17. Van Laarhoven CJ, Kamm MA, Bartram CI, Haligan S, Hawley PR, Philips RK. Relationship between anatomic and symptomatic long-term results after rectocele repair for impaired defectation. Dis Colon Rectum 1999; 42(2): 204–10.
18. Lopez A, Anzen B, Bremmer S et al. Durability of success after rectocele repair. Int Urogynec J 2001; 12(2): 97–103.

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TRANSANALINĖ REKTOCELĖS KOREKCIJA

S a n t r a u k a

Šio darbo tikslas buvo įvertinti transanalinės rektocelės korekcijos rezultatus koloproktologiniame Vilniaus universitetinės centro ligoninės chirurgijos skyriaus poskyryje.

Per 13 mėnesių, nuo 2001 metų balandžio iki 2002 metų gegužės, chirurgijos skyriaus koloproktologiniame poskyryje dėl rektocelės operuotos 6 moterys. Jų amžius buvo nuo 51 iki 76 metų, vidurkis – 64 metai. Visos pacientės skundėsi vyraujančia obstrukcine defekacija. Pacientės ištirtos kliniškai ir digitaliai pro išangę, atlikta rektoskopija, retrogradinė irigoskopija bei defekografija. Visais atvejais defekografijos duomenys patvirtino rektocelės diagnozę. Visoms pacientėms taikyta tokia pati transanalinė operacija.

Rezultatai. Po operacijos komplikacijų nebuvo. Hospitalizacija truko nuo 3 iki 8 parų, vidutiniškai – 5 paras. Penkioms (83,3%) pacientėms obstrukcinės defekacijos simptomai išnyko, o vienai (16,7%) ryškiai sumažėjo. Visos pacientės ištirtos kliniškai ir digitaliai pro išangę prieš išrašant bei praėjus 2 mėnesiams po operacijos. Visos pacientės operacijos rezultatais patenkintos. Tiriant digitaliai pro išangę, rektocelės požymių nei vienai nenustatyta.

Išvada. Transanalinė rektocelės operacija buvo saugi ir patikima tiek koreguojant anatominį defektą, tiek ir jo sukeltus simptomus. Rektocelė galėtų atkreipti platesnės koloproktologų auditorijos Lietuvoje dėmesį ne tik kaip viena obstrukcinės defekacijos priežasčių, bet ir kaip viena iš patologijų, sėkmingai koreguojamų koloproktologijos poskyriuose.

Raktažodžiai: rektocelė, rektocelės korekcija, rektovaginalinė fascija, transanalinė operacija, obstrukcinė defekacija