

To study the outcome of vaginal reconstructive surgery for isolated rectocele

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Abstract

Aim: To study the symptomatic relief of local and bowel symptoms after vaginal reconstructive surgery for isolated rectocele.

Introduction: Isolated posterior compartment defect as isolated rectocele is on the raise due to multi parity and chronic constipation, sedentary and faulty lifestyle. The term rectocele means herniation of rectum into vaginal canal. The posterior wall defect presented with difficult defecation, constipation, incomplete evacuation, pressure in recto vaginal area, manual vaginal replacement during evacuation. The cases with isolated rectocele were evaluated and relief of local and bowel functions before and after the pelvic repair were assessed.

Materials and Methods: A prospective study was done between August 2016-August 2018, for the period of 2 years at IIMSR, Dasauli, dept. of OBG, Lucknow wherein cases with isolated rectocele were identified and pelvic repair of the rectocele was done by repair of pararectal fascia without mesh along with pelvic floor repair wherein the medial fibres of levator ani was approximated. Out of 426 cases presenting to the gynaecology OPD with mass per vagina, local pressure symptoms, after detailed history and examination, 25 cases of isolated rectocele were included in the study.

Result: A total of 25 cases out of 426(5.86%) were with isolated rectocele. 25 cases underwent pelvic repair of the rectocele by repair of pararectal fascia without mesh, excision of redundant vagina along with pelvic floor repair with approximation of medial fibres of levator ani muscles. There was significant association between isolated rectocele, chronic constipation and multi parity. The statistical analysis was done using chi square and pvalue.

Keywords: Isolated rectocele, Chronic constipation, Pelvic repair.

Aim

To study the symptomatic relief of local and bowel symptoms after vaginal reconstructive surgery for isolated rectocele.

Materials and Methods

A prospective study was done between August 2016-August 2018, for the period of 2 years at Integral Institute of Medical Sciences and Research, Dasauli, kursi Road, department of OBG, Lucknow, where in cases with isolated rectocele were identified and pelvic repair of the rectocele was done by repair of pararectal fascia without mesh along with pelvic floor repair wherein the medial fibres of levator ani was approximated. Out of 426 cases presenting to the gynaecology OPD with mass per vagina and local pressure symptoms, after detailed history and examination, 25 cases of isolated rectocele were included in the study.

Out of 426 cases screened, the patients with uterine prolapse, cystocele, uterine tumours, dysfunctional uterine bleeding, rectal prolapse, haemorrhoids, post hysterectomy vault prolapse, irritable bowel syndrome were excluded. Only patients with isolated rectocele, 25 cases were identified in the study. The associated factors chronic constipation, multiparity were analysed. The main outcome in the form of pressure symptom relief and functional bowel outcome were analyzed.

Result

A total of 25 cases out of 426(5.9%) were with isolated rectocele. 25 cases underwent pelvic repair of the rectocele

by repair of pararectal fascia without mesh, excision of redundant vagina along with pelvic floor repair with approximation of medial fibres of levator ani muscles. Out of 25 cases 23 cases (92%) had significant improvement in the pressure and bowel symptoms. 2 cases had relief from local pressure symptoms, but had no relief from chronic constipation. 23 of 25 cases were associated with chronic constipation. 25 of 25 cases had multiparity with vaginal delivery at home by untrained personnel. There was significant association between isolated rectocele and chronic constipation. The significance of association between categorical variables - isolated rectocele, multiparity and chronic constipation was calculated by chi square and estimation of p-value.

Out of 426 cases screened, in which 25 cases found with isolated rectocele. Prevalence of isolated rectocele was observed 5.9%.

Table 1: shows the descriptive statistics

	Constipation	Multi parity
Mean	.92	1.00
Std. Deviation	.277	.000
Variance	.077	.000
Skewness	-3.298	
Std. Error of Skewness	.464	.464
Kurtosis	9.641	
Std. Error of Kurtosis	.902	.902

Table 2: Shows the frequency distribution of cases with respect to Constipation

	Constipation		
	Number of Cases	Percentage	Cumulative Percent
No Improvement	2	8%	8
Improvement	23	92%	100

Table 3: Shows the frequency distribution of cases with respect to Multi parity

	Multi parity	
	Number of Cases	Percentage
Positive	25	100

Association between variables i.e., Chi square value is 17.64
 The two-tailed P value is less than 0.0001
 By conventional criteria, this difference is considered to be extremely statistically significant.



Fig. 1:



Fig. 2:



Fig. 3:

Discussion

The herniation of the front wall of rectum into the posterior wall of the vagina is called the rectocele. The tissue between the rectum and the vagina is known as rectovaginal septum and this structure if thin and weak results in rectocele.

A rectocele may be an isolated finding or occur as part of generalized weakening of pelvic floor muscles. The weakening of pelvic floor can occur due to advanced age, multiple vaginal deliveries and birthing trauma during vaginal delivery. Apart from this, chronic constipation and excessive straining with bowel movements can cause rectocele.

Rectocele may cause rectal and vaginal symptoms. The rectal symptoms are difficulty in evacuation during bowel movements and need to press against back wall of the vagina and/or space between rectum and vagina (perineal body) in order to have bowel movement. The vaginal symptoms include the sensation of bulge or fullness in the vagina, discomfort in sexual intercourse and vaginal bleeding. Symptomatic rectocele can lead to excessive straining with bowel movements, urge to excessive straining with bowel movement, urge to have multiple bowel movements throughout the day with rectal discomfort. Significant stool strapping may occur in some patients.

The incidence of rectocele is 20-80% in general population and is thought to be increasing. Most recently, rectocele and enterocele were noted to occur in approximately 40% of asymptomatic parous women. Rectocele may have broader incidence than previously thought and may not be a result of parity.

The most common causes of rectocele are obstetric events. Traumatic obstetric events, constipation results in eversion of introitus resulting in efficient bowel movement need for valsalva manouvre. Rectocele may result from secondarily from pathologic stretching of the pudental nerves during descent of the fetal head, causing atrophy and denervation of pelvic floor muscles. Electromyography studies shows 80% occurrence of denervation of perineal nerves after vaginal delivery. Denervation recovers after the postpartum period. However, it has been shown injury may

be cumulative with increasing parity. Defecation disorders may cause a subgroup of rectocele due to weakening of rectovaginal septum. Paradoxical sphincter reaction (Anismus) may lead to individual unconsciously contracting the voluntary striated muscles to defecate resulting in stool in rectum and worsening of rectocele.

The pelvic floor disorders had profound effect on women's life and affect enormous percentage of adult female population. The life time risk of surgery for pelvic floor disorder is 11.1%.^{1,2} The co-morbidity of these cases needs evaluation of urinary, fecal, pelvic floor function. 76% of women with pelvic organ prolapsed have defects of posterior vaginal wall.^{2,4} The epidemiological, neurological and postpartum anal sphincters ultrasound studies would suggest that trauma during vaginal delivery may result in pelvic floor disorders.⁵⁻⁸

The studies have shown, chronic straining with constipation may result in peripheral neuropathy and stretching of connective tissue between anterior rectum and posterior vaginal wall.⁹⁻¹³ The posterior wall defect presented with difficult defecation, constipation, incomplete evacuation, pressure in rectovaginal area, manual vaginal replacement during evacuation.¹⁴⁻¹⁷

The pelvic organ prolapsed quantification system was followed for clinical examination. The patient was examined in lithotomy position or semirecumbent position using a Sims speculum/bivalve speculum with maximum valsalva effort.^{18,19}

Studies have shown there is considerable improvement in anatomical and functional outcome following surgery.¹⁹⁻²³ The treatment of asymptomatic posterior wall defect is controversial. Conservative management using diet and behavioral modification should also be simultaneously addressed. The overall success of the surgery depends on the symptoms, length of time symptoms have been present and approach of surgery. Some studies report significant improvement in 75-90% of patients. A surgeon's familiarity with technique and experience in repairing rectocele also influence the result. The traditional rectocele approach was described by Nichols and Wheelers. Here by an inverted T incision, a triangular wedge of vagina wall is excised. The rectovaginal fascia is approximated with interrupted sutures. Medial fibres of levator ani muscles are approximated and perineal body is repaired. The posterior vaginal mucosa is trimmed and approximated with continuous absorbable sutures. Other methods are transrectal repair, transabdominal repair, mesh/graft augmentation.²⁴⁻²⁶

Many surgeons ascertained that the main support of the uterus was the vagina, which was supported by insertion of levator ani muscles into the perineum. This concept was the basis for incorporation of placement of levator ani muscle placement into posterior colpoperineorrhaphy. Some of the complications of rectocele repair mentioned in the literature were bleeding, constipation, difficulty in passing stools, dyspareunia, pelvic pressure, proctotomy, rectovaginal fistula. Three different surgical techniques are used to repair symptomatic rectocele: levator placement, site-specific repair, and transanal and trans abdominal repair. They all can be done with or without mesh/graft augmentation. Gynaecologic surgeons have traditionally advocated transvaginal repair involving levatorplasty.

Conclusion

In rural setup due to limited infrastructure and economic constraints if isolated rectocele/posterior compartment defect is corrected meticulously with expertise, by repair of pararectal fascia without mesh with excision of redundant vagina along with pelvic floor repair with approximation of medial fibres of levator ani muscles offered considerable relief from pressure and bowel symptoms. More than 11% of women who reach age of 80 undergo surgery for urinary incontinence or genital prolapse. As the society ages, the population suffering from rectocele or defecation disorders will increase. The clinicians will need to be well versed in proper evaluation and the operative techniques to manage the defects. More research is needed to be done to understand the correlation between anatomic defect and functional derangement that occurs secondary to posterior wall prolapse.

Limitation

Due to economic constraints and rural setup, mesh was not used. Further comparative study between mesh and non mesh outcome can be done. As the study was for 2 years, further long term outcome needs to be studied.

Conflict of Interest: None.

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