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# To study the outcome of vaginal reconstructive surgery for isolated rectocele: a prospective observational study

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**Abstract**
**Aim:** to study the outcome of vaginal reconstructive surgery for isolated rectocele.
**Materials and Methods:** The present prospective observational study was conducted in the Department of Obstetrics and Gynecology, Darbhanga Medical College and Hospital, Bihar. 30 confirmed cases of isolated rectocele were included in the study.
**Results:** mean age of the study subjects was 61.14 years. Majority of them were multiparous (60.0%). Overall improvement was observed in 93.3% of the subjects and 86.7% were found satisfied with the surgery.
**Conclusion:** there is considerable improvement in anatomical and functional outcome following surgery.

**Keywords:** rectocele, functional outcome, vaginal reconstructive surgery

## Introduction

The rectovaginal septum is weakened by age and parturition, allowing the rectum to protrude into the vagina during evacuation efforts [1]. This out pouching of the rectum into the vagina is termed a rectocele.

The normal vagina is stabilized and supported on three levels. Superiorly, the vaginal apical endopelvic fascia is attached to the cardinal-uterosacral ligament complex. Laterally, the endopelvic fascia is connected to the arcus tendineus fasciae pelvis, with the lateral posterior vagina attaching to the fascia overlying the levator ani muscles. Inferiorly, the lower, posterior vagina connects to the perineal body [2]. The rectovaginal septum is described as a continuous layer of support extending from the sacrum above to the perineal body below [3].

A rectocele results from a stretching or actual separation or tear of the rectovaginal fascia, thus leading to a bulging of the posterior vaginal wall noted on examination during a Valsalva maneuver. Rectoceles may be located proximal (high), medial (mid), or distal (low) in the septum.

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, and urge to have multiple bowel movements throughout the day with rectal discomfort. Significant stool strapping may occur in some patients.

Still there is there is no consensus on several critical areas of outcomes. Hence the present study was undertaken with the aim to study the outcome of vaginal reconstructive surgery for isolated rectocele.

## Materials and Methods

The present prospective observational study was conducted in the Department of Obstetrics and Gynecology, Darbhanga Medical College and Hospital, Bihar.

### Inclusion Criteria

1. Those who have provided the informed consent
2. Confirmed cases of isolated rectocele

### Exclusion Criteria

1. Patients presented with the following problems: Uterine prolapse, cystocele, uterine tumours, dysfunctional uterine bleeding, rectal prolapse, haemorrhoids, post hysterectomy vault prolapse, irritable bowel syndrome.
2. Patients who have not signed the informed consent
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The study protocol was reviewed by the Ethical Committee of the Hospital and granted ethical clearance. After explaining the purpose and details of the study, a written informed consent was obtained.

### Sample selection

The sample size was calculated using a prior type of power analysis by G* Power Software Version 3.0.1.0 (Franz Faul, Universitat Kiel, Germany). The minimum sample size was calculated, following these input conditions: power of 0.80 and $P \leq 0.05$ and sample size arrived were 30 participants per group.

## Methodology

### Surgical procedure

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.

Preoperatively, patients completed a health declaration form and a validated questionnaire about their general health condition and questions focusing on gynecological symptoms, especially prolapsed symptoms [4]. The gynecologist completed a form on preoperative objective findings, an operation form at the time of surgery with detailed information about technique and materials, and a postoperative form at discharge. 12 months postoperatively, all patients filled in a validated questionnaire concerning well-being and treatment-related complications (GynOp 1-year questionnaires) [5].

### Statistical analysis

The recorded data was compiled and entered in a spreadsheet computer program (Microsoft Excel 2010) and then exported to data editor page of SPSS version 19 (SPSS Inc., Chicago, Illinois, USA). Descriptive statistics included computation of percentages and means.

## Results

**Table 1:** demographic and clinical profile

| **Age** | **61.14±4.26** |
|---|---|
| BMI | 27.61±1.13 |
| Parity | |
| 0-2 | 12 (40.0%) |
| ≥3 | 18 (60.0%) |
| Smoking History | 8 (26.7%) |

**Table 2:** patient's outcome

| **Outcome variables** | **N (%)** |
|---|---|
| Improvement in postoperative bowel symptoms | 24 (80.0%) |
| UTI post-operatively | 22 (73.3%) |
| Reoperation | 2 (6.7%) |
| Reduced frequency of sexual intercourse | 1 (3.3%) |
| Patient satisfaction | 26 (86.7%) |
| Overall Improvement | 28 (93.3%) |

## Discussion

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 placation of levator any muscle placation into posterior colpoperineorraphy. 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 placation, 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.

In the present study the overall improvement was observed in 93.3% of the subjects and 86.7% were found satisfied with the surgery. Studies have shown there is considerable improvement in anatomical and functional outcome following surgery [6, 10]. 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 surgeons familiarity with technique and experience in repairing rectocele also influence the result.

Despite the weak relationship between vaginal prolapse and bowel symptoms, the literature supports our finding that surgery for repairing rectocele appears to improve bowel symptoms [11]. One possible explanation for this apparent contradiction is that rectocele repairs may anatomically alter the rectum or pelvic floor in a manner that improves anorectal function independent of its effect on vaginal anatomy (ie, narrow rectal caliber, reconstitute the perineal body). In a Cochrane Review of the surgical management of pelvic organ prolapse, Maher *et al*. noted that there are insufficient data on the effect of surgery on bowel symptoms. 15

## Conclusion

The present study concluded that there is considerable improvement in anatomical and functional outcome following surgery. Overall improvement was observed in 93.3% of the subjects and 86.7% were found satisfied with the surgery.

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