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General Surgery

RECTAL PROLAPSE AND MANAGEMENT : A STUDY ON 30 CASES

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ABSTRACT

BACKGROUND: Rectal prolapse is protrusion of part or whole rectum through the anal orifice. Management of this condition is challenging and there are different surgical approaches.

AIM: To evaluate and compare different surgical treatment modalities in treatment of rectal prolapse.

MATERIALS AND METHODS : Patients with full thickness prolapsed rectum , normal colonic transit and those found fit in ASI grade1 and grade 2 were selected for the study . Different surgical approaches were reveiwed and the outcome in terms of recurrence and complications were evaluated.

RESULTS: out of 30 cases, 21 cases underwent open abdominal procedures (in which resection rectopexy for 9 cases and pre-sacral rectopexy only for 12cases) and 6cases underwent perineal repair (altemeier-4 delorme-2), 3cases underwent laparoscopic (rectopexy-2,resection rectopexy-1).Average hospitalisation was shorter for perineal than abdominal procedures . Post op complications and mortality were observed in 3cases within follow up of 6months,no mortality and no recurrence.

CONCLUSION: The type of surgery for patients with rectal prolapse should be selected by taking patients overall condition and surgical experience into account. In young patients, abdominal approach must be performed but laparoscopic approach has its advantage Altemeiers procedure shall be chosen in older patients with low complication rate and recurrence.

KEYWORDS :

INTRODUCTION

- RECTAL PROLAPSE, OR PROCIDENTIA, is defined as a protrusion of the rectum beyond the anus.
- Complete or full-thickness rectal prolapse is the protrusion of all of the rectal wall through the anal canal;
- If the rectal wall has prolapsed but does not protrude through the anus, it is called an occult (internal) rectal prolapse or a rectal intussusception.

The aim of treatment is to control the prolapse, restore continence, and prevent constipation or impaired evacuation.

- This goal can be achieved by

(1) Resection or plication of the redundant bowel and/or
(2) Fixation of the rectum to the sacrum.

In incontinent patients, the patulous sphincter ani begins to regain its tone approximately 1 month after the procedure, and full continence is generally restored within 2 to 3 months.

Numerous procedures have been described for the treatment of rectal prolapse and are generally categorized into perineal or abdominal approaches.

MATERIALS AND METHODS

- Its a prospective study of 30 patients with complete rectal prolapse admitted in my hospital during the period June 2017 to August 2019 after departmental and institutional ethics committee clearance was taken.
- All adults age (greater than 18 years) Patients admitted under department of general surgery, MGM Hospital Warangal, Patients with isolated full thickness prolapsed rectum , normal colonic transit and those found fit in ASI grade1 and grade 2 were selected for the study .
- Patients were excluded if operated for recurrence, if concomitant gynecological procedures are planned, paediatric patients age less than 18 years.
- Different surgical approaches (abdominal, perineal, laparoscopic)were reviewed and the outcome in terms of recurrence and complications were evaluated.
- The nature of the procedures and the complications associated were explained to the patients.
- The type of procedure was based on Preference of patient.
- All patients underwent preoperative colonoscopy to rule out neoplasia.
- All patients received 2nd or 3rd generation cephalosporins which was given at the time of induction of Anaesthesia and continued for two to three days depending on surgeon's choice.
- Nature of parenteral analgesia was usually opioid/NSAID at the standard dose required
- Postoperative pain was evaluated using visual analogue scale(VAS) at 12 hours 24 hours and 48 hours postoperatively.
- Postoperative complications/morbidity like surgical site infection, burst abdomen, constipation, incontinence, persistent perianal pain, sexual dysfunction, urinary retention, paralytic ileus, anal stricture, incisional hernia were observed.
- Patient were followed up for a Minimum period of six months.
- Comparison between surgeries was done with respect to the duration of surgery, intraoperative blood loss, postoperative pain, complications/ morbidities, post operative hospital stay and recurrence.

RESULTS

- 30 cases with full thickness rectal prolapse were operated during the period of study.
- 18 cases underwent open abdominal procedures in which resection rectopexy for 6 cases and pre-sacral rectopexy (suture rectopexy for 8 cases and mesh rectopexy for 4 cases).
- 9 cases underwent perineal repair (altemeier's-6 delorme-3),
- 3cases underwent laparoscopic rectopexy.
- Average hospitalisation was shorter for perineal than abdominal procedures.
- Post op complications and morbidity were observed in 3cases of abdominal procedures within follow up of 6months, no mortality and no recurrence.

Baseline characteristics of patients with complete rectal prolapse who underwent an abdominal or perineal procedure

CHARACTERISTICS	Abdominal procedures	Laparoscopic procedure	Perineal procedures
AGE	52±17	40±5	67±12

SEX FEMALE/MALE	6/12	2/1	5/4
REDUCIBLE, YES	17	3	5
PROLAPSED LENGTH cms	6.2±2.6	5.2±1.3	5.2±2.8
PRESENCE OF CO-MORBIDITIES	12	1	4
DURATION OF PROLAPSE	4±3	3±1	8±4
ANAESTHESIA TYPE GENERAL	24	3	1

Clinical and functional outcomes of Patients with complete rectal prolapse who underwent an abdominal and perineal procedures

VARIABLE	Abnormal Procedure	Laparoscopic procedure	Perineal Procedure
Operation time (min)	165±60	200±50	90±30
Hospital stay	10±4	6±3	7±2
Functional outcomes	7	3	3
Persistent constipation	5	2	1
Persistent incontinence	2	1	2
Overall recurrence	-	-	-

Immediate post operative (within 2 months) complications of Patients with complete rectal prolapse who underwent an abdominal and perineal procedures

Variable	Abdominal Procedure	Laparoscopic Procedure	Perineal Procedure
Immediate minor complications	4	1	1
Wound infection	2	-	1(D)
Urinary retention	1	1	-
Anal pain during defecation	1	-	-
Temporary haematochezia	-	-	-
Immediate major complications	1	1	0
Ileus	1(OPR)	1	-
Anastomosis site leakage	0	-	-
Anal stricture	0	-	-

Delayed Post operative (After 2 months)complications of Patients with complete rectal prolapse who underwent an abdominal and perineal procedures.

VARIABLE	Abdominal Procedures	Laparoscopic Procedure	Perineal Procedures
DELAYED MINOR COMPLICATIONS	3	-	0
Urinary retention	1	-	-
Sexual dysfunction	2	-	-
Anal pain	-	-	-
DELAYED MAJOR COMPLICATIONS	2	0	0
Ileus	-	-	-
Anastomotic stricture	1(ORPR)	-	-
Incisional hernia	1(ORPR)	-	-
Rectovaginal fistula	-	-	-
Rectal perforation	-	-	-

DISCUSSION

- Several operational procedures for complete rectal prolapse have been performed in our institution over the past 3 years.
- PRE-SACRAL RECTOPEXY was the most commonly performed procedure in our institution throughout the entire study period.
- By contrast Laparoscopy has been practiced since last year. overall 3 cases underwent Laparoscopic rectopexy.
- In my study rectal prolapse were more common in men than women.
- Peak incidence in women is in their 7^{th} decade whereas in men incidence drops after 5^{th} decade.
- Patients with prolapse most frequently complain of protrusions of rectum during defecation. This may reduce spontaneously Or require manual reduction.
- Patients frequently complains of constipation and tenesmus.
- Incontinence is major complaint of more than half of the patients.(20 cases)
- Less frequent presenting symptoms include bleeding, pain, mucous discharge.

ABDOMINAL PROCEDURES

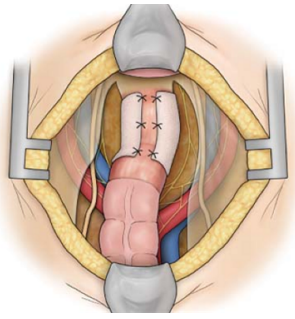
- Many abdominal techniques have been described, differing only in the extent of rectal mobilization, the methods used for rectal fixation, and the inclusion or exclusion of resection.

SUTURE RECTOPEXY

- The mobilization and subsequent healing by fibrosis tends to keep the rectum fixed in an elevated position as adhesions form, attaching the rectum to the presacral fascia.

RIPSTEIN PROCEDURE (ANTERIOR SLING RECTOPEXY)

- The procedure includes a complete mobilization of the rectum and a subsequent fixation of it to the facia lata or with synthetic materials to the anterior wall of the rectum and fixates the sling to the sacrum by sutures.



RESECTION RECTOPEXY

- By resection of the excessive rectum, torsion or volvulus of the sigmoid colon can be prevented.
- Also, by shortening the left colon, the mobility of the left colon supported by the diaphragm ligaments almost disappears, which helps prevent recurrence.
- In addition, relief from constipation can be anticipated in some patients.

LAPAROSCOPIC RECTOPEXY

- In comparison with open surgery, laparoscopic surgery has the advantages of less pain, shortened hospital stay, early recovery, and early return for work.

PERINEAL APPROACHES

DELORME PROCEDURE

- It peels the mucosa of the prolapsed bowel, plicate the remaining muscle layer and performs mucosal anastomosis.

ALTEMEIER'S PROCEDURE

- The Altemeier procedure reinforces the pelvic floor muscle after resecting the prolaped bowel, closing the pouch of Douglas.
- Performing a lavatoplasty in combination and should remove the prolapse and improve incontinence.
- Summarizing studies reported until now, in comparison with the perineal approach, the recurrence associated with the abdominal approach is low, and the improvement of fecal incontinence is superior.
- Thus, except for elderly patients of the high risk group, the abdominal approach has been recommended.
- Simple rectopexy is sufficient, and the use of meshes and other foreign materials should be restricted.
- For patients with constipation or patients with a long excess bowel, resection may be performed in combination.
- Focusing on the prevention of recurrence, lateral ligaments should be resected, and for the prevention of the deterioration of constipation, lateral ligaments should be preserved.
- For high risk patients, the perineal approach should be selected. Since its recurrence rate is higher than that of the abdominal approach, the possibility of a reoperation should be discussed sufficiently.
- The Delorme procedure or the Altemeier procedure is selected depending on the length of prolapse and on the experience and familiarity levels of the surgeon.
- Perineal approach is favoured due to shortening of hospital stay, early return to normal life, low surgical stress, and good cosmetic

effect, even if the possibility of recurrence is somewhat high.

- Although many kinds of surgical methods for rectal prolapse have been introduced, there is no surgical procedure that satisfies all kinds of postoperative complication.
- The incidence of rectal prolapse is low and many diverse surgical methods have been introduced; thus, it is difficult to compare diverse surgical methods on a sufficient number of patients.
- The type of surgery for patients with rectal prolapse should be selected by taking patients overall condition and surgical experience into account.
- The Perineal procedure can be performed effectively in all rectal prolapse patients, especially for elderly high risk patients, patients with constipation or evacuation difficulties and treatment outcomes comparable to the abdominal approach can be anticipated.
- The perineal procedure operation time is short and general anaesthesia is not required, so it can be applied to the high risk group.
- In addition, recurrence and recovery bowel function after surgery are not inferior to those of the abdominal approach, it cause less immediate and delayed complications.
- Thus, it can be applied to all rectal prolapse patients except for those in whom deterioration of faecal incontinence after surgery is a concern.
- In young patients ,abdominal approach must be performed but laparoscopic approach has its advantage of better visualization and tissue approach etc.. Over abdominal procedures Both have less recurrence rates and abdominal procedures have high intraoperative blood loss and high operative risk .

CONCLUSION

- The type of surgery for patients with rectal prolapse should be selected by taking patients overall condition and surgical experience into account.
- In young patients ,abdominal approach must be performed but laparoscopic approach has its advantage of better visualization and tissue approach etc
- Perineal procedure should be chosen for all rectal prolapse patients, especially for elderly high risk patients,

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