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Changing trends in rectal prolapse management in a tertiary care hospital

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ABSTRACT

Introductions: Optimum operation for rectal prolapse is not established yet. Laparoscopic procedures are gaining popularity and on the other hand, proponents of perineal procedures are also not scarce.

Methods: Rectal prolapse cases operated during five years in a tertiary care hospital regarding immediate post-surgical outcome of abdominal and perineal procedures were reviewed.

Results: Total 30 patients of rectal prolapse were operated during the study period. Over the years, Altemiere's rectosigmoidectomy outnumbered abdominal procedures. Immediate postoperative complications were similar except for one case in perineal group needing laparotomy for intraperitoneal bleed.

Conclusions: Altemiere's rectosigmoidectomy was safe and increasingly acceptable procedure at our center for patients with rectal prolapse.

Keywords: abdominal rectopexy, Altemiere's rectosigmoidectomy, rectal prolapse

INTRODUCTIONS

Rectal prolapse is common but an underreported entity in surgical practice. Mode of surgical management varies widely. Degree of prolapse, general condition of the patients, surgeon's preference and expertise and associated constipation and incontinence could be the reasons for adoption of various surgical procedures. There is a lack of consensus amongst surgeons regarding the optimum operation and systematic reviews have failed to settle these controversies.[1] Laparoscopic procedures are gaining popularity in most centres in Nepal.[3] But it has been challenged by perineal procedures with excellent results. Hence, search for a less invasive and effective technique is still on.

The aim of this study was to assess short term surgical outcome in perineal procedure compared with abdominal procedures for rectal prolapse

METHODS

All patients subjected to surgical procedure for rectal prolapse between July 2010 to June 2015 were included in the study. Patient charts were reviewed. Patient characteristics, clinical features at the time of presentation, surgical procedure, length of hospital stay, complications and short-term recurrence rate were evaluated. Incomplete data were excluded from the study. For the purpose of comparison between perineal and abdominal procedure, partial mucosal prolapse and Thiersch procedure were excluded.

Continuous variables were expressed as mean±SD. Analysis of Variance (ANOVA) test was used to analyse continuous variables between different groups while chi square test was used on categorical variables.

RESULTS

Thirty patients were operated during the study period. Average age was 52 years (range 5 to 94). All patients had prolapse associated with various degrees of incontinence. None of them had previous surgery for the same problem and none of them had complication like strangulation of the prolapsed rectum at the time of presentation, (Table 1).

Perineal procedure had shorter hospital stay (3 vs 5 days, $p>0.05$). Two patients with abdominal procedures had wound infection requiring prolonged dressings, antibiotics and debridement, (Table 3). One patient with Altemiere's procedure required blood transfusion and laparotomy for intraperitoneal bleeding. There was no recurrence during the limited period of follow up.

DISCUSSIONS

In this series, among various techniques applied for the treatment of rectal prolapse, there was gradual increase in number of perineal procedures in last two years with acceptable complication rate except one requiring laparotomy for hemorrhagic shock. This was in the beginning phase of Altemiere's operation and was managed successfully. No serious complications were noted in the latter cases.

In a series of 27 patients[4] over six years, reports re-exploration and sigmoidostomy for obstruction after Wells operation and no complications in perineal procedures. Different modalities in the treatment of rectal prolapse, seems to be common.[4] This could be because of the patient's general condition and degree of prolapsed and surgeon's preference or expertise.

Though patient satisfaction was not measured due to retrospective nature of the study, having no external wound in perineal procedures provides a great relief for patients. Popularity of perineal procedure is obvious as less traumatic than abdominal procedure. Laparoscopic techniques are popular for its minimally invasive nature, but the long learning curve makes it difficult to reproduce.

Table 1. Characteristics and symptoms of patients with rectal prolapse (n=30)

Patient characteristics	Value	Percentage
Mean Age in years (+/- SD)	52.9 (+/- 18.09)	
Female to Male ratio	2:1	
a. Mass protruding from the anus during defecation	30	100%
b. Spontaneous or manual reduction possible	30	100%
c. Full thickness prolapsed	28	93.33%
d. Incontinence	20	66.66%
e. Constipation	1	3.33%
f. Mucus Discharge	28	93.33%
g. Per Rectal bleed	10	33.33%
h. Ulceration or strangulation	0	0%
i. Preoperative Sigmoidoscopy done	20	66.66%
Mean Duration of symptoms (in months)	14	

Table 2. Different procedures carried out for rectal prolapsed (n=30) during five years

Name of the procedure	Number
Perineal Procedure	
a. Thiersch Procedure*	5
b. Banding*	2
c. Delorme's Procedure	2
d. Altemeier Procedure	9
i. With levataroplasty	4
II. Without levataroplasty	5
Abdominal Procedure	
a. Open suture rectopexy	6
b. Open mesh rectopexy	6

*Excluded for comparison in table 3.

Table 3. Comparison between abdominal and perineal procedures carried out in inpatients with rectal prolapse (n=30)

	Abdominal Procedure (n=12)	Perineal Procedure (n=11)	p value
Mean age in years	46.66	57.18	0.88
Duration of Hospital stay (median)	5	3	0.8
Complications (Clavien-Dindo)			
Clavien-Dindo 0	9	10	-
Clavien-Dindo 1	2	0	-
Clavien-Dindo 2	1	0	-
Clavien-Dindo 3	0	1	-
Readmission within 28 days of surgery	0	0	-
Reoperation within 28 days of surgery	0	1	-
Recurrence of prolapse during follow up period	0	0	-
Mean follow up period (in weeks)	6.8	4.3	0.55

Perineal procedure especially Altemier's rectosigmoidectomy is gaining popularity in our centre because it is less invasive, safe and effective procedure for rectal prolapse. Popularity of perineal procedures are shown by other case series of 75 patients[5] in which perineal procedures were carried out in significantly older patients with lesser morbidity and similar recurrence rates.

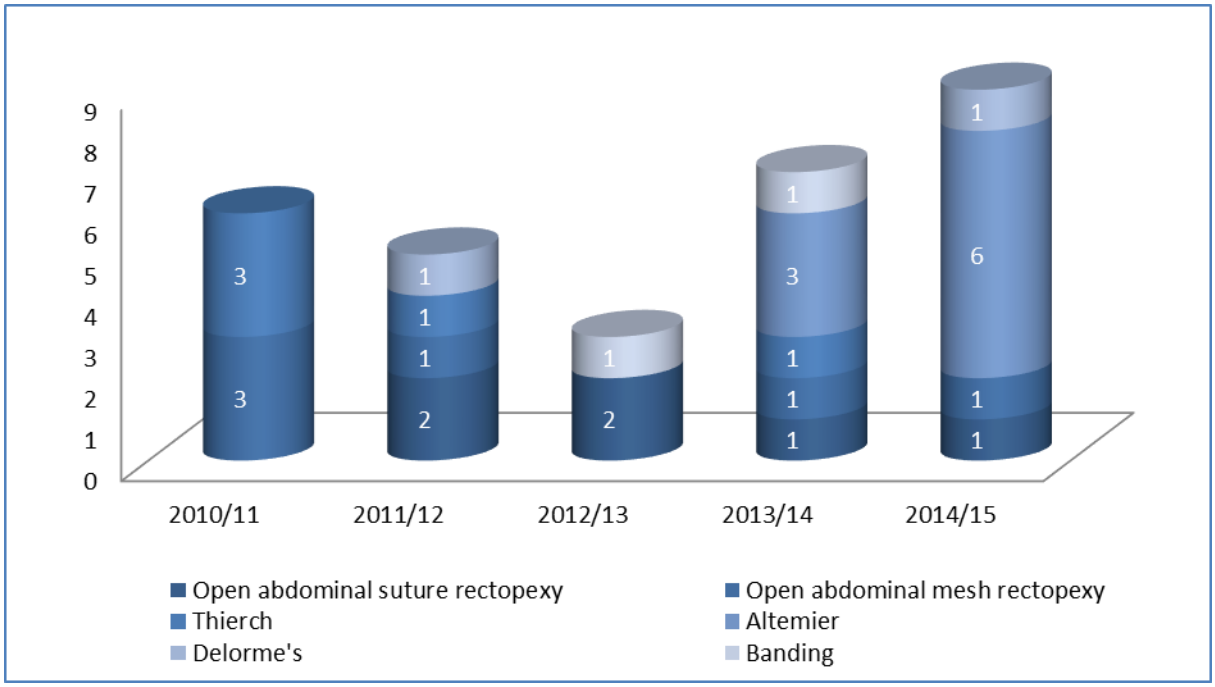

Figure 1. Trend of different procedures in patients with rectal prolapse (n=30) over the five years periods

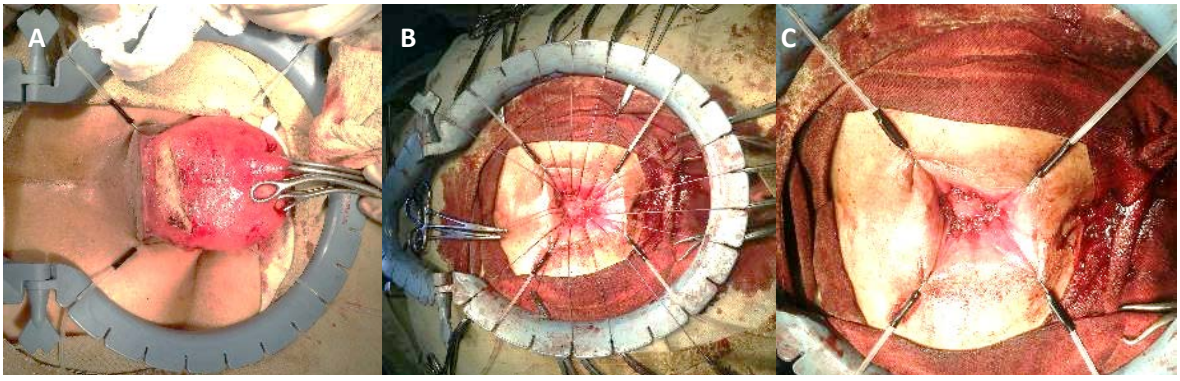

Figure 2. Steps of Altemiere's Operation: A. Initial incision in the prolapsed rectum B. After rectosigmoidectomy C. After hand-sewn anastomosis post rectosigmoidectomy

Though age difference in these two groups was not significant (46.6 years vs 57.1 years, p = 0.88), this series also shows that perineal procedures was more common in older patients where as abdominal procedures was more common in younger patients.

The primary factor that prevents recurrence is unknown. From the very beginning there has been debate whether it is suspension or fixation of rectum to sacrum or resection of redundant sigmoid that plays the role in prevention of recurrence.[6] There are enough evidence showing combination of these two to be the ideal treatment of choice for rectal prolapse.[7] Theoretically, Altemier's rectosigmoidectomy also involves resection of the part of the sigmoid and rectum which seems to be the striking difference when compared to other perineal as well as abdominal procedures like Delorme's or Ripstein's and Well's operations, which do not involve resection. This could be the reason

why Altemiere's rectosigmoidectomy works better than other non-resectional procedures.

This study is not devoid of limitations. Surgical procedures were carried out by four different surgeons. Obsolete procedures like Thiersch and banding was carried out for rectal prolapse for some unclear reasons, hence was excluded from comparison. Heterogenicity in surgical procedure can be assumed. Levataroplasty was undertaken in few cases of Altemier's rectosigmoidectomy according to surgeon's preference. We admit that follow up was not enough to determine recurrence. Similarly, because of the retrospective nature of the study, the effect in defecation habit (like stool urgency) after procedure could not be verified, which is important aspect of the surgery.

CONCLUSIONS

We observed gradual increase in number of perineal procedures for rectal prolapse. Altemiere's rectosigmoidectomy was a safe alternative to laparoscopy in our centre with limited facilities and expertise.

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