

Original Research

Assessment of cases of Laparoscopic Rectal Resections- A clinical study

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ABSTRACT:

Background: Laparoscopic rectal resections are usually performed in rectal carcinomas. The present study was conducted to assess cases of laparoscopic rectal resections. **Materials & Methods:** 62 cases of prostate cancer of both genders were divided into 2 groups of 28 each. Group I were treated laparoscopically and group II with open operation. Surgery was performed 6 to 8 weeks after CRT. Laparoscopic surgery was performed. **Results:** Out of 62 patients, males were 34 and females were 28. Tumor size <8 cm was present in 47 and >8 cm in 15, CRT was done in 42 and not performed in 20 cases, anterior resection was performed in 38 and APR in 24 cases, 52 cases were well differentiated and 10 were other. T^b was 1-2 in 14, 3-4 in 48, N^c was 0 in 50 and + in 12 cases. The difference was significant (P<0.05). **Conclusion:** Laparoscopic rectal resections are usually performed in patients with rectal carcinomas. In most of the patients tumor size was less than 8 cm.

Key words: Laparoscopic, Rectal resections, Tumor.

Received: October 20, 2020

Accepted: November 27, 2020

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This article may be cited as: Varshney GP. Assessment of cases of Laparoscopic Rectal Resections- A clinical study. J Adv Med Dent Res 2020;8(12):198-200.

INTRODUCTION

Advantages of laparoscopic rectal surgery include shorter hospital stay, less blood loss and transfusion, less analgesic requirement, shorter times to first bowel movement and mobilization and less postoperative morbidity.¹ However, despite all these advantages, only few centers perform laparoscopic rectal resections (19.2 %).² Laparoscopic rectal resections are considered technically difficult because they require pelvic dissection, rectal transection, and anastomosis in the narrow pelvis, and therefore, it is not widely accepted and adopted yet. In a recent paper, Greenblatt et al³ analyzed the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) database and reported that only 19 % of 5420 proctectomies were performed by laparoscopic approach in the USA. Earlier studies reported high rates of conversion and postoperative morbidity associated with laparoscopic rectal surgery.⁴ In addition, conversion to open surgery is associated with longer hospital stay, greater blood loss, more postoperative morbidity, and some authors reported worse oncological results.⁵ In this context, selection of patients may be an important

factor at the beginning to improve patients' outcomes. Agha et al⁶ reported a significant decrease of conversion rate from 13 % during the first 100 procedures to 3 % for the last 100 procedures. The present study was conducted to assess cases of Laparoscopic rectal resections.

MATERIALS & METHODS

The present study was conducted among 62 cases of prostate cancer of both genders. All patients were informed regarding the study and their consent was obtained.

Data such as name, age, gender etc. was recorded. Patients were divided into 2 groups of 28 each. Group I were treated laparoscopically and group II with open operation. Patients were subjected to rigid rectal endoscopy with biopsies, total colonoscopy, chest and abdominal computed tomography, pelvic CT scan. Surgery was performed 6 to 8 weeks after CRT. Laparoscopic surgery was performed with five trocars according to the principles described by Heald. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I: Distribution of patients

Total-62		
Gender	Males	Females
Number	34	28

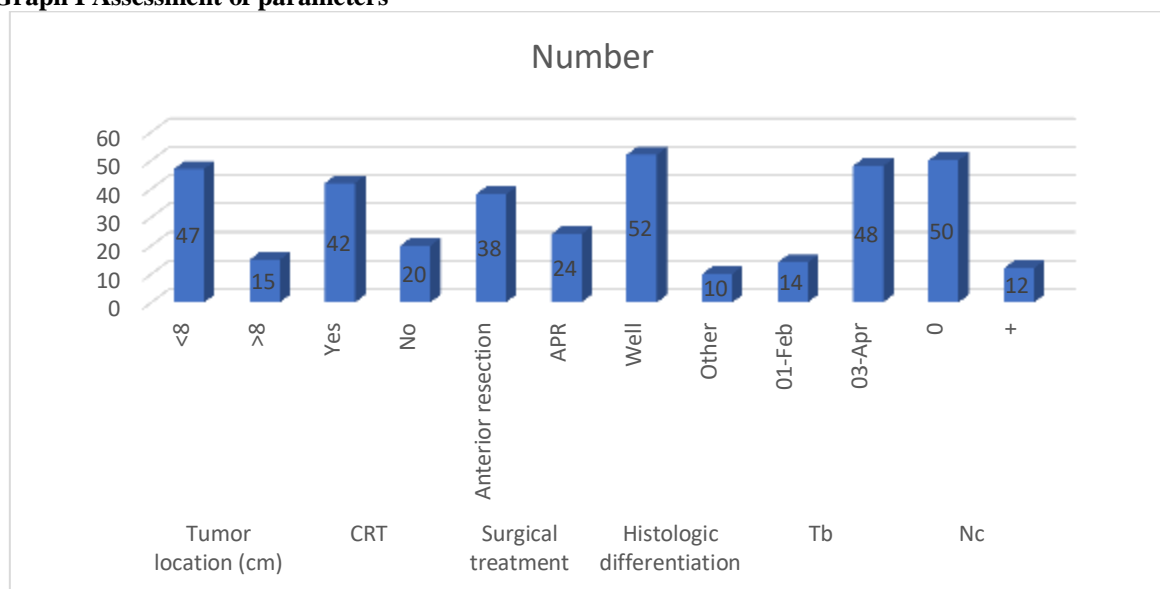
Table I shows that out of 62 patients, males were 34 and females were 28.

Table II Assessment of parameters

Variables	Parameters	Number	P value
Tumor location (cm)	<8	47	0.04
	>8	15	
CRT	Yes	42	0.05
	No	20	
Surgical treatment	Anterior resection	38	0.14
	APR	24	
Histologic differentiation	Well	52	0.01
	Other	10	
T ^b	1-2	14	0.02
	3-4	48	
N ^c	0	50	0.01
	+	12	

Table II, graph I shows that tumor size <8 cm was present in 47 and >8 cm in 15, CRT was done in 42 and not performed in 20 cases, anterior resection was performed in 38 and APR in 24 cases, 52 cases were well differentiated and 10 were other. T^b was 1-2 in 14, 3-4 in 48, N^c was 0 in 50 and + in 12 cases. The difference was significant (P< 0.05).

Graph I Assessment of parameters



DISCUSSION

The most consistent advantage for laparoscopic proctectomy in the literature is an improvement in physiological recovery, not dissimilar to what was seen for laparoscopic colectomy.⁷ Thus, time to first bowel or stoma movement has typically been found to be reduced by 1–2 days, time to oral diet by 1 day, and time to independent mobilization by 1–1.5 days.⁸ This improved physiologic recovery, however, has not

translated into consistent reductions in hospital stay, which remain long (around 10 days). A significant reduction of hospital stay (2.7 days) was demonstrated in the meta-analysis, suggesting that this is achievable.⁹ The first report from the classic trial raised serious concerns regarding the adequacy of laparoscopic proctectomy, reporting higher rates of positive circumferential resection margins for laparoscopic anterior resection (16/129 or 12%) as

compared with open anterior resection (4/64 or 6%). Guillou and colleagues¹⁰ advised against the routine practice of laparoscopic anterior resection based on these findings. The present study was conducted to assess cases of Laparoscopic rectal resections.

In present study, out of 62 patients, males were 34 and females were 28. Hrra et al¹¹ determined the predictable factors for conversion during laparoscopic proctectomies, and for postoperative morbidity, in order to assist in defining the best candidates of patients for initial experience in laparoscopic proctectomies for rectal adenocarcinoma. Sixty-nine patients were included. There were 35 (50.7 %) men with a median age of 53 years. Forty-seven patients had tumors located below 8 cm from the anal verge, and sphincter preserving surgery was performed in 52 (75.4 %) patients. Thirty-four patients were operated in the early period (before 2009). Conversion rate was 17.4 %. In multivariate analysis, the independent predictive factors for conversion were time period (before 2009) ($p = 0.007$, Exp. 19.9; CI (95 %) 2.2–177.4) and tumors located 8 cm above the anal verge ($p = 0.028$, Exp. 5.23, CI (95 %) 1.2–22.8). Twenty-two patients (31.9 %) had a complicated postoperative course. Only male gender was associated with postoperative complications.

We found that tumor size <8 cm was present in 47 and >8 cm in 15, CRT was done in 42 and not performed in 20 cases, anterior resection was performed in 38 and APR in 24 cases, 52 cases were well differentiated and 10 were other. T^b was 1-2 in 14, 3-4 in 48, N^c was 0 in 50 and + in 12 cases. Khaikin et al¹² compared laparoscopic management of rectal cancer to open surgery. Thirty-two patients in the laparoscopic group (LG) were matched for tumor location, stage, comorbidity, and type of surgical procedure to 50 patients in the open group (OG). There were no statistically significant differences between the groups relative to American Society of Anesthesiologists score or tumor, node, metastasis stage; however, body mass index and age of the LG were significantly lower compared with the OG ($P < 0.05$). In the LG, the procedure was successfully laparoscopically completed in 28 patients (87.5%). The median operative time was 240 minutes in the LG and 185 minutes in the OG ($P < 0.05$). Overall morbidity was 25% and 38%, respectively ($P = 0.1$), the median hospital stay was 6 days, and median time to first bowel movement was 3 days in the LG

compared with 7 and 4 days in the OG, respectively ($P = 0.7$ and 0.01 , respectively). The number of identified lymph nodes, distal and radial margins were comparable between both groups. Median follow-up was 10 (1 to 18) months.

The limitation of the study is small sample size.

CONCLUSION

Authors found that laparoscopic rectal resections are usually performed in patients rectal carcinomas. In most of the patients tumor size was less than 8 cm.

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