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AN ASSESSMENT OF DEVELOPING SURGICAL PRACTICE OF RECTAL CANCER IN PAKISTAN WITH REFERENCE TO COMPLETE MESO-RECTAL ELIMINATION

[1]Dr. Tayyaba Anwar, [2]Dr. Anam Sarwar, [3]Shaaban Anwer

[1]Woman Medical Officer, BHU 455/EB District Vehari

[2]DHQ Hospital Gujranwala

[3]DHQ Hospital Sialkot

Abstract:

Objective: *This study is designed to strive for the elaboration of presentation and pathology of rectal cancer, and to assess the indigenous experience after complete mesorectal elimination at a basic care hospital.*

Methodology: *To take an account of carcinoma rectum, researchers selected a sample of (200) patients which observed mesorectal excision at Allied Hospital, Faisalabad (February to August 2017). These cases reported through outpatient and in emergency departments of the hospital. We conserved the demographic history of each patient and maintained all the related information along with variables, as medical performances and demonstrations, the severity of tumour with a specific location, TNM appearance, and Duke's presentation. Additionally, we also secure the documentation of their surgical process and all those complications which appeared for further considerations during the time of treatments. We conducted all this documentation on proformas for certification. During the process of follow up session, we took the examination of each patient at two months for the first year, then for the next three years, we submitted the follow up at the interval of every four months and annually subsequently.*

Results: *The findings of the research reported almost the same ratio (1.6: 1) of male to female. The study observed age of the patients from (14 – 70) years. We determined the site of tumour at upper one third as (25%), at the middle, one third was (30%) and lower one third was (45%). A great margin of patients that was more than (62%) belonged to Dukes B Group. We did not observe any death case prior to the operation in the course of study, though, the study recorded complications in a total number of fifty-nine (29.5%) patients. These complications mainly related to colostomy (13.0%). We monitored (5%) patients with wound infection in abdomen, anastomotic dehiscence in (1.0%), (5%) patients with infection in their urinary tract, and impotence appeared in (1.5%). Twenty percent patients reported local recurrence.*

Conclusion: *This research claims mesorectal excision as a safe and reasonable technique for rectal cancer operation with feasible perioperative illness and has satisfactory local disease control.*

Keywords: *Rectal Cancer, Total Meso-rectal Excision, Presentation, and Outcome.*

Corresponding author:

Dr. Tayyaba Anwar,

Woman Medical Officer,

BHU 455/EB District Vehari

QR code

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INTRODUCTION:

Many clinical types of research and surgeons have made the case that rectal cancer is commonly challenging disease for the patients and the physicians as well. Moreover, it stands second among other lethal disease related to other kinds of cancers. It is very common, especially in western countries [1]. Many of the researchers and observations reported that the cases of rectal cancer are abruptly increasing in Pakistan as well as among the other developing countries. They further noted that gradual westernization of the food intake and automation of industry can be causes of this spread. The medical science and treatment procedures against the rectal cancer are not similar to those colon cancers. They proposed the reason for this difference is the possible locality of the rectum inside pelvis and particularly its closeness to the anus [2]. Total mesorectal excision (TME) has achieved a global acceptance of preference because it states a very suitable technique for removal of rectal cancer with the help of surgery. Total mesorectal excision (TME) comes up with the least ratio of local repetitions, more, significantly when it meets with pre-surgery radiation cure [3 – 6]. In total mesorectal excision, physicians maintain the data of hypogastric nerves as well as the splanchnic nerves because it is noteworthy in all aspects, as it does not produce the leading disease or malfunctioning of sexual and urinary operations [7, 8]. Therefore, we designed this research to take an account of the operation of rectal cancer and pathology as well as this study will help to assess the original experience of total mesorectal excision at first handedly especially in the hospital.

METHODOLOGY:

To wholly achieve the best and valid outcomes of the study, we shortlisted two hundred patients who lucidly presented the rectal adenocarcinoma over a long period of time. We studied these patients during their time of surgical treatment at Allied Hospital, Faisalabad (February to August 2017). We studied the general history of all the patients. Moreover, we also examined them physically before their operations. In course of the study, we ensure the history of the patients that physicians have completed their examination of radiography of their chests, biochemical examination of liver, ultrasound and tomography has done to locate the metastatic disease in the locale of the pelvis. To assess synchronous tumours, all the patients observed colonoscopy. We conducted the counselling for the patients regarding colostomy and sexual malfunctioning. We ensured the provision of antibiotics for the preparation of patients for surgery. The entire process recorded curative resection in upper and middle carcinoma. For anterior resection, fifty-five cases observed one-third of rectum. Whereas, (1/3) in lower side was abdominoperineal resection. We administered Palliative procedures, (10) cases through Hartmann procedure and sixty-five experienced sigmoid colostomies. In terms of anterior resection, we did it through manual anastomosis in (46) cases and (9) cases qualified stapler.

It is affirmed that the spirit of the surgical procedure is the progress for the sake of the avascular plane between the mesorectum and cover parietal tissues of the pelvis just below the distal extremities. The removed blueprint encapsulates the entire subsequent, lateral and distal mesorectum beyond the surface of substandard hypogastric plexus, that we carefully secured. Ultimately, doctors emphasize by keeping the significance in their consideration that prevention of implantation by using the saline while washing the rectal stump under the targeted area and clamp prior to anorectum division and pelvis as well. For the invasion of extramural vascular, Dukes stage, with status and number of nodes, tumour discrimination we analyzed all the operative specimens were analyzed histopathologically. We offered radiotherapy and adjuvant chemotherapy to the patients who reported Dukes C lesion.

We examined the patients after every two months of the first year after their surgery and then the next three years we called them after every four months and lastly once thereafter. During this whole follow-up session after their operation, we maintained the history of their physical examination. Moreover, in this history, we recorded the symptoms like a loss in their weight, the degree of fatigue, change in bowel habits rectal bleeding, pain in the abdomen or pelvic pain, cough recurrence, and bone pain. Follow-up record also took an account of the level of serum CEA, CT scan and reports of ultrasound of abdomen and pelvis. Additionally, it contained, blood count, liver operation test, serum carcinoembryonic antigen, CT Scan and ultrasound of abdomen and pelvis. Moreover, it included CT scan of abdomen and x-rays of chest every year including colonoscopy two years after. We also approached and maintained the contact with those patients who failed, because of any reason, to report to LUMHS for follow-up. We prepared history by getting the information on phone calls regarding their health conditions from the local health units in their localities. We used SPSS to analyze and evaluate the data of demographic outcomes, collected from the patients.

RESULTS:

This study is encapsulated two hundred patients and their age ranged from (14-70) years. The maximum ratio of disease, we observed in the age group was (45 – 60) years. Statistics of the research found no big difference among male to female ratio that is almost equal (1.6: 1). This study recorded the usual site of the tumor in lower one-third of rectum (45%). Among the patients we recorded the common symptoms like bleeding per rectum in (60%), abdominal pain (30%), changes in bowel habits (30%), obstructions in the intestine were (15%), diarrhoea was (5%), and constipation in (55%). The histopathology details presented adenocarcinoma in (98%) cases. Most of the patients (above 60%) stood in Duke's B Group. Physicians operated all patients, performed anterior resection in fifty-five (27.5%) patients, abdominoperineal removal in seventy (35%) patients, Hartmann's procedure in ten (5%) patients and palliative colostomy, they carried out in sixty-five (32.5%) patients. Ten patients reported complications as infection in the abdominal wound, colostomy in twenty-six, and anastomotic dehiscence in two cases whereas; three reported impotence before the operation.

Table – I: Clinical and Demographic Details

Presentation		Number	Percentage
Bowel Habit	Diarrhoea	10	5
	Intestinal Obstruction	30	15
	Pain Abdomen	60	30
	Constipation	110	55
Distance from Anal Verge	0 – 4 cm	90	45
	4.1 – 8 cm	60	30
	8.1 – 12 cm	30	25
Location of Tumor	Upper One Third	50	25
	Middle One Third	60	30
	Lower One Third	90	45

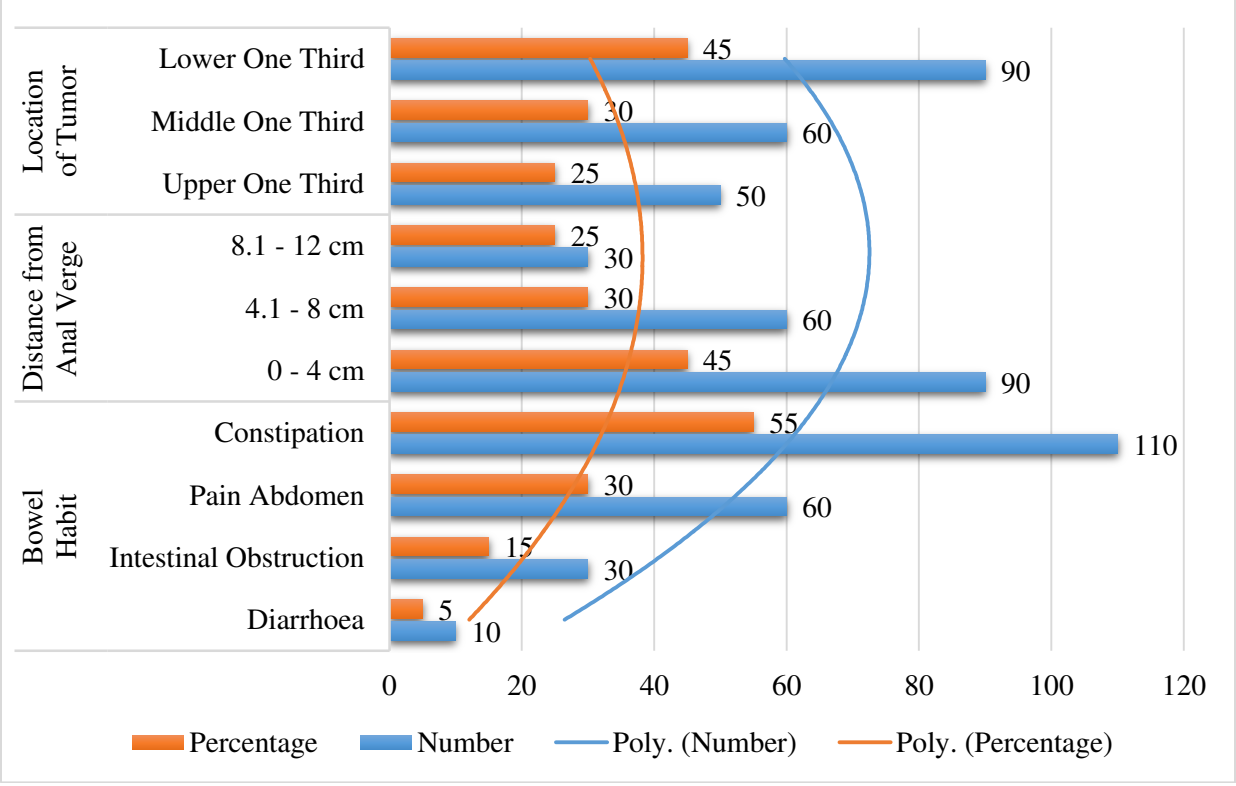


Table – II: Stage and Histopathology

Presentation		Number	Percentage
Diagnostic Pathology	Adenocarcinoma	196	98.00
	Others	4	2.00
Diagnostic Histology	Well Differentiated	6	3.00
	Moderately Differentiated	93	46.50
	Poorly Differentiated	55	27.50
	Unknown	46	23.00
Clinical T-Stage	< T2	4	2.00
	T3	142	71.00
	T4	54	27.00
Clinical N-Stage	N0	80	40.00
	N1-2	110	55.00
	Unknown	10	5.00
Lymphovascular Invasion	Present	26	13.00
	Absent	140	70.00
	Unknown	34	17.00
Circumferential Radial Margin	Positive	4	2.00
	Negative	196	98.00
Duke's Stage	A	0	0.00
	B	125	62.50
	C	75	37.50

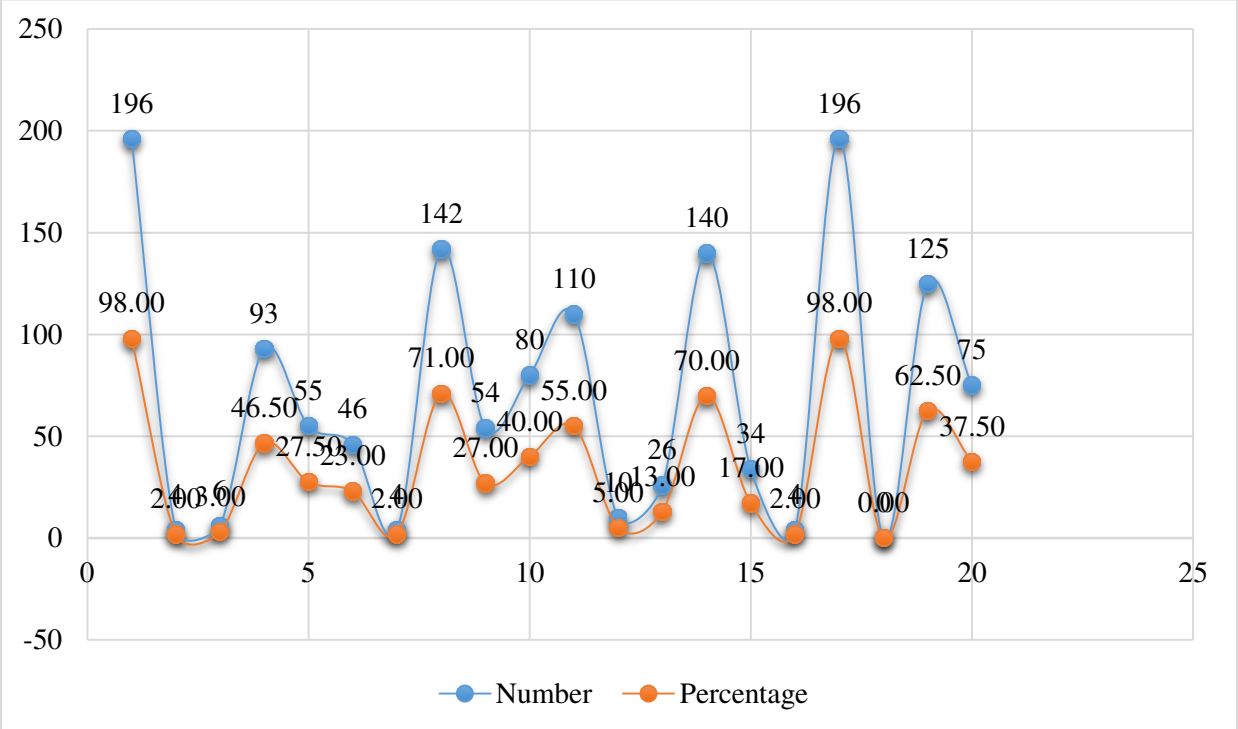


Table – III: Surgical Procedures

Presentation	Number	Percentage
Anterior Resection	55	27.50
Abdominal Perineal Resection	70	35.00
Harmann's Procedure	10	5.00
Colostomy	65	32.50

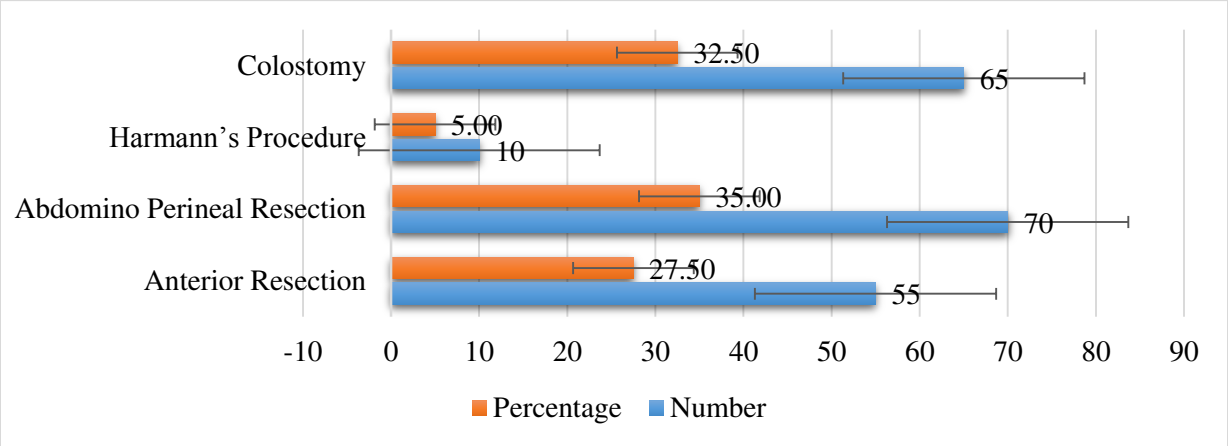
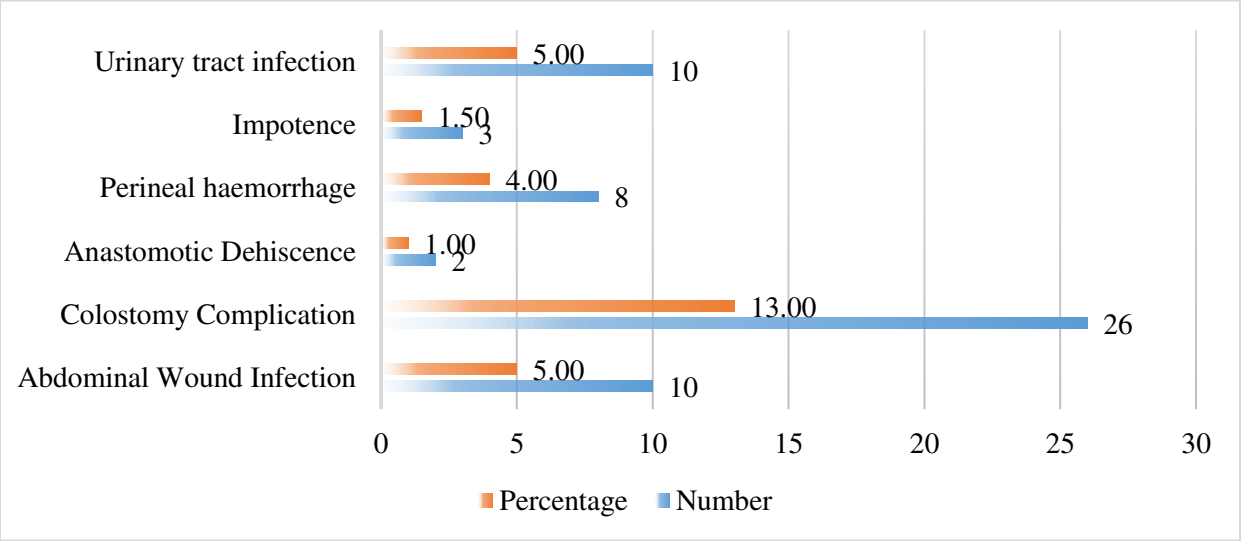


Table – IV: Complications

Presentation	Number	Percentage
Abdominal Wound Infection	10	5.00
Colostomy Complication	26	13.00
Anastomotic Dehiscence	2	1.00
Perineal haemorrhage	8	4.00
Impotence	3	1.50
Urinary tract infection	10	5.00



DISCUSSION:

Developed countries all around the globe have reported the cases of colorectal. The cases of rectal cancer are gaining raise in Asian countries. Pakistan Medical Research Council recorded in 1992, the cases of rectal cancer are not common so far but some studies in Karachi, Lahore and Peshawar reported the high ratio of incidence as compared to the western countries [9, 10]. Mean age is fifty-five years that is contrary to western reported cases [11 – 14]. But the location of the tumor is as similar as in western patients [15, 16]. This entire surgical presentation reported the highly successful rate of survival among the patients [18, 19]. Our study did not report any of those multiple complications reported in the western patients during TME [22, 23]. In this study, we have observed that patients come up with advanced disease.

At large scale, we treated the patients with the sphincter prescribed procedures and low frontal resections by following TME principles and techniques in (70% – 80%) of patients [24, 25]. Patients and doctors both enjoy the benevolence of this process by dint of modern surgical equipment. Surgical tool manufacturing industry is progressing day by day due to modern research. During the research, we performed anterior resection in fifty-five patients (27.5%) that we can compare with the outcomes of others local and regional researches from Pakistan, in the parallel to this activity, we also performed anterior resection in (19%) of rectal cancers [26]. We recorded the resectability rate as (67.5%) curative resection in (62.5%) potentially in the course of study that is (15% – 18%) less than the internationally reported statistics [27]. Researchers also observed that Open TME is commonly practised as compared to laparoscopic TME [28]. Therefore, we conducted open TME for all of our patients owing to their learning curves and some of the procedural issues in the pelvis. The involvement of distal margin is another determining factor that increases local recurrence more importantly when it is less than (2 cm). Japanese claimed that lymph node resection is one of the main effective elements that determines the degree of survival, but in this study, we did not perform it. Again, we also did not practice lateral pelvic lymph node dissection that is again a claim by Japanese for the progress of survival factors and limitation of common reappearance [29, 30]. During the study, we did not observe any malfunctioning in the urinary bladder and sexual potential, moreover, we stated ineffectiveness just in (1.5%) cases.

CONCLUSION:

In this study, we commonly diagnosed youngsters with rectal cancer in an advanced stage. Therefore, we observed mesorectal excision for the sake of optimal surgical treatment for the patients. The results and aftermaths of total mesorectal excision for the treatment of rectal cancer concluded that acceptable perioperative disease and acceptable common disease is a constraint with our surgical operation practices. This study validates the protection and application of total mesorectal removal for a rectal cancer operation. Researchers credit that by using modern and novel surgical operation tools and procedure rectal cancer surgery can be further developed to augment sphincter safeguarding with suitable oncological results.

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