

A CLINICAL STUDY OF RECTAL MALIGNANCY

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ABSTRACT

BACKGROUND

Colorectal cancer is the fourth most common cancer in men and third most common cancer in women worldwide. Although distributed worldwide, the incidence is higher in industrialized and western countries. The rising trend in incidence and mortality from colorectal cancer is more striking in affluent than in poorer societies and differs substantially among ethnic groups. Due to significant development in the treatment of rectal malignancy, early and accurate detection of cases with thorough clinical and laboratory investigations will help to reduce mortality and morbidity of patients.

MATERIALS AND METHODS

It is a Cross Sectional Study conducted in the Department of Surgery, GEMS, Srikakulam. Duration of study was from July 2013 to July 2016. Inclusion Criteria- All patients with provisional diagnosis as rectal malignancies attending King George Hospital, Andhra Medical College, Visakhapatnam and patients above 18 yrs. Exclusion Criteria- Patients below 18 yrs. and patients with bleeding from rectum due to benign polyps, benign ulcers, inflammatory bowel disease, diverticulosis.

RESULTS

Among 50 Rectal malignancy cases, 38 (76%) were presented with bleeding rectum followed by 20 (40%) altered bowel habits, 12 (24%) showed pain abdomen, 8 (16%) presented with Obstruction, 6 (12%) presented with loss of appetite, and 6 (12%) presented with Weight loss. In our study bleeding per rectum was the most common complaint with which Rectal malignancy patients presented. 24 % underwent anterior resection, 36% underwent abdomino-perineal resection (APR), 16% underwent loop colostomy, 16% underwent neoadjuvant chemoradiation, 8% underwent palliative therapy.

CONCLUSION

Bleeding per rectum is the most frequent complaint with which rectal malignancy patients presented. The study also concludes that palpable rectal growth was found in 80% of patients and 72% presented in early stage of disease. Nearly 42% patients underwent abdominoperineal resection. Outcome of surgical treatment was normal in 60% and anastomotic leak in 10%, wound infection in 20%, stromal retraction in 2.5%, death is 7.5%.

KEYWORDS

Colorectal Cancer. Lynch Syndrome, Low Rectal Cancer.

HOW TO CITE THIS ARTICLE: Laxman J. A clinical study of rectal malignancy. J. Evid. Based Med. Healthc. 2018; 5(8), 663-666. DOI: 10.18410/jebmh/2018/135

BACKGROUND

Colorectal cancer is the fourth most common cancer in men and third most common cancer in women worldwide.¹ Although distributed worldwide, the incidence is higher in industrialized and western countries.² Many Asian countries including China, Japan, South Korea, and Singapore, have experienced an increase of 2-4 times in the incidence of colorectal cancer during the past few decades. The rising trend in incidence and mortality from colorectal cancer is more striking in affluent than in poorer societies and differs substantially among ethnic groups. Although changes in dietary habits and life-style are believed to be reasons

underlying the increase, the interaction between these factors and genetic characteristics of the Asian populations might also have a pivotal role.³

In the last two decades rectal cancer has changed from a surgically managed disease into a multidisciplinary treatment model resulting in considerable improvements in the survival and outcome. Rectal cancer is a distinct subset of colorectal cancer where specialized disease-specific management of the primary tumor is required. There have been significant developments in rectal cancer surgery at all ages of disease, in particular the introduction of local excision strategies for pre-invasive and early cancers, standardized total mesorectal excision for resectable cancers. In locally advanced and metastatic disease, combining chemo radiation with radical surgery may achieve total eradication of disease and disease control in the pelvis. Evidence for resection of metastasis to the liver and lung has been extensively reported in the literature. Colorectal cancers that develop in individuals without hereditary links are referred to as "Sporadic" and account for 75% of all colorectal cancers. A potential genetic influence is identified

Financial or Other, Competing Interest: None.

Submission 01-02-2018, Peer Review 07-02-2018,

Acceptance 14-02-2018, Published 16-02-2018.

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DOI: 10.18410/jebmh/2018/135



in the remaining 25% of patients, including family history (15-20%), Lynch syndrome (5%) and FAP (<1%).

The aetiology is multifactorial and includes risk factors such as increasing age, male sex and previous colorectal cancer. Life style factors like lack of physical activity, low fruit and vegetable intake, low fiber and fatty food, obesity, alcoholism, drug addiction, use of tobacco etc. have all been associated with a high risk of colorectal cancer.^{4,5} Adenoma is the precursor to rectal malignancy. Approximately 10% of adenomas progress into invasive carcinoma through a well-defined sequence of genetic change called the adenoma-carcinoma sequence. This process may take 10-15 years.⁶

Due to significant development in the treatment of rectal malignancy early and accurate detection of cases with thorough clinical and laboratory investigations will help to reduce mortality and morbidity of patients. Hence the present study was intended to evaluate the incidence of rectal malignancy with relation to demographic variables, varied clinical presentation, risks associated with various lifestyle factors and stages of presentation of rectal malignancy.

MATERIALS AND METHODS

It is a Cross Sectional Study conducted in the Department of Surgery, GEMS, Srikakulam. Duration of study was from July 2013 to July 2016.

Selection of Cases- The total sample size was 50 cases. Patients provisionally diagnosed as having rectal malignancies either clinically or radiologically are included in this study. Written consents were taken from all of them. The presenting symptoms were recorded from all the included patients. A detailed past history, family history and personal history were recorded. A detailed general and systemic examination was done. Routine investigations like Complete Blood Count, Viral Markers, Blood Urea Serum Creatinine, Random Blood Sugar, Blood grouping and typing, Ultra Sound abdomen, Chest X-ray, Colonoscopy and biopsy. After conformation of diagnosis CECT ABDOMEN was done to stage the disease. For stage 1 and stage 2 surgeries was planned. For locally advanced lesions neo adjuvant chemoradiation was planned and palliative treatment was offered for metastatic disease.

Inclusion Criteria

All patients with provisional diagnosis as rectal malignancies attending King George Hospital, Andhra Medical College, Visakhapatnam and patients above 18 yrs.

Exclusion Criteria

Patients below 18 yrs. and patients with bleeding from rectum due to benign polyps, benign ulcers, inflammatory bowel disease, diverticulosis.

Data Analysis- Data analysis was done by using MS excel. Data was presented in the form of frequencies and percentages using tables and graphs.

RESULTS

Table 1 showed that out of 50 Rectal malignancy cases, maximum number of cases was reported in the age group 41-50 years i.e. 16 (32%) followed by 31-40 years 13 (26%). Rectal malignancy was found in a relatively younger age group with a mean age of 49 years. Figure 1 showed that males 34 (68%) were more prone to Rectal malignancy than females 16 (32%).

Among 50 Rectal malignancy cases, 38 (76%) were presented with bleeding rectum followed by 20 (40%) altered bowel habits, 12 (24%) showed pain abdomen, 8 (16%) presented with Obstruction, 6 (12%) presented with loss of appetite, and 6 (12%) presented with weight loss. In our study, bleeding per rectum was the most common complaint with which rectal malignancy patients presented.

Age Group (Years)	Total	Percentage (%)
18-30	2	4
31-40	13	26
41-50	16	32
51-60	9	18
61-70	8	16
above 70	2	4

Table 1. Age Distribution of Rectal Malignancy Cases (n=50)

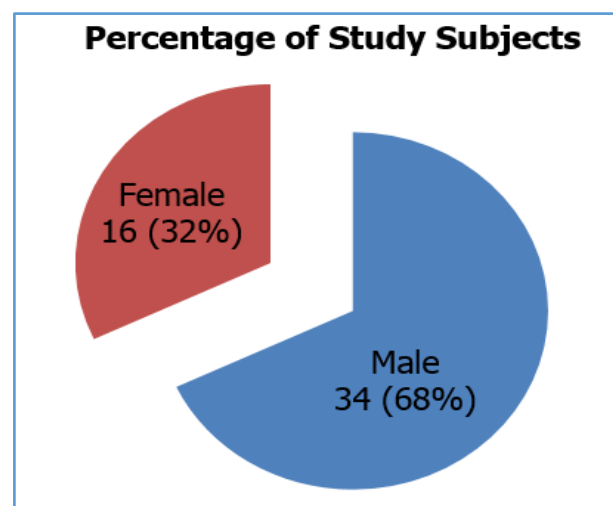


Figure 1. Sex-Wise Distribution of Rectal Malignancy

Table 2 showed the personal history details of 50 Rectal malignancy cases. Highest number of cases was reported in smoking individuals. Figure 2 depicted the examination findings of Rectal malignancy cases. The results of 50 histological picture Rectal malignancy cases had revealed that, 24% cases were well differentiated adenocarcinoma, 48% were moderately differentiated adenocarcinoma, 16% were poorly differentiated adenocarcinoma and 12% were signet ring cell carcinoma. The results of the present study also showed that, maximum number of Rectal malignancy patients was in early stage 38 (76%) followed by locally advanced stage 8 (16%) and metastasis stage 4 (8%).

Personal Habits	Total	Percentage (%)
Mixed diet	41	82
Vegetarian diet	9	18
BMI>30	28	56
Smoking	42	84
Alcohol	38	76

Table 2. Personal History Details of Rectal Malignancy

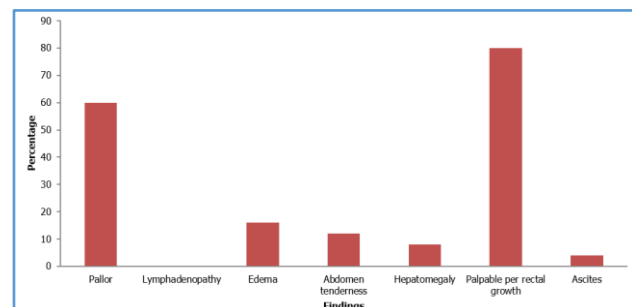


Figure 2. Examination Findings of Rectal Malignancy Cases

As depicted in the Table-3 it was showed that among 50 Rectal malignancy cases 24% underwent anterior resection, 36% underwent abdomino-perineal resection (APR), 16% underwent loop colostomy, 16% underwent neoadjuvant chemoradiation, 8% underwent palliative therapy. Of the 8 patients who were referred to radiotherapy in view of locally advanced disease for neoadjuvant chemoradiation, 2 patients were in follow up. After thorough investigations APR was done for these two patients. Similarly, one patient came for follow up after loop colostomy. APR was done for this patient after appropriate investigations. Figure-3 showed the outcome on surgical treatment of Rectal malignancy cases and showed that among 38 cases of surgical treatment the outcome was normal in 60%.

Modes of Treatment	Total	Percentage
Anterior resection	12	24
Abdominoperineal resection	21	42
Loop colostomy	8	16
Neoadjuvant chemoradiation	8	16
Palliative therapy	4	8

Table 3. Modes of Treatment of Rectal Malignancy

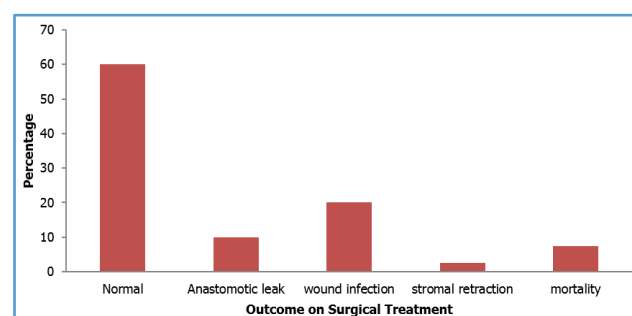


Figure 3. Outcome on Surgical Treatment of Rectal Malignancy

DISCUSSION

By studying the age factor as one of the demographic variable, the current study showed that majority of the cases

were reported in the age group varying between 31-50 years (58%) and the mean age was 49.58. Similar results were obtained by Sudharshan et al⁷ In his study of Colorectal cancer in young adults in a tertiary care hospital in Chhattisgarh, Raipur with a median age of 43. According to our study sex distribution of Rectal malignancy was 68% in males and 32% in females. There is slightly higher male ratio compared to results obtained by Rasool et al⁸ and Ferlay et al⁹ Bleeding rectum was the most common presentation. Compared to other studies.¹⁰ incidence of bleeding per rectum is much higher in our study. In the present study it was showed that personal habits also play an important role in the development of colorectal cancer which include mainly mixed diet in 41 (82%) and smoking in 42 (84%) alcohol consumption in 38 (72%) which was similar to the results of previous studies.^{11,12} On general and systemic examination of the current study showed maximum were reported from Pallor in 30 (60%) and Palpable per rectal growth in 40(80%) which was similar to findings of Minardi et al¹³ According to the results of the study on histological picture of 50 Rectal malignancy cases, moderately differentiated adenocarcinoma were most common and agreed to the reports of Sudharshan et al. and Minardi et al^{7,13} The results also showed 76% cases were presented with early stage of disease similar to Anneke Schroen study. Varied treatment modalities in our study subjects were 12 (24%) underwent anterior resection, 21 (42%) underwent abdomino-perineal resection, (8) 16% underwent Loop colostomy, (8) 16% underwent neoadjuvant chemotherapy, 4 (8%) underwent Palliative therapy. Loop colostomy was done in 16% of obstructive cases. Of the 8 patients who were referred to radiotherapy in view of locally advanced disease for neoadjuvant chemoradiation, 2 patients were came for follow up. After thorough investigations APR was done for these two patients. Similarly, one patient came for follow up after loop colostomy. APR was done for this patient after appropriate investigations. These reports were similar to Anneke Schroen study. Historically, the gold standard operation for rectal cancer was the abdominoperineal resection (APR), performed using blunt dissection. Approximately 80% of all patients with low rectal cancer (i.e. 0-5 cm from the anal verge) have an APE to ensure an adequate distal margin. Currently, APR is the most commonly used operative procedure for rectal cancer. Obstruction is the most frequent complication in patients with coin-Rectal malignancy. Patients with carcinoma of the colon and rectum which has progressed to the point of obstruction, perforation, or both, have a poor prognosis. The proportion of patients with these complications in whom curative resection is possible is diminished. Eight patients in our study underwent neo adjuvant chemoradiation and among them perineal resection was planned and rest of the patients loss follow up and did not return. Post operatively the outcome was normal in 24 (60%), Anastomotic leak in 4 (10%) Wound infection in 8 (20%), Stromal retraction in 1 (2.5%), Death in 3 (7.5%) similar to Rasool et al⁸ The perineal wound poses a unique risk, predisposing to major postoperative complications. Despite improved surgical

techniques, the rates of perineal wound dehiscence are reported to be higher than 10%.

CONCLUSION

In our study Rectal malignancy was found in relatively young age group with a mean age of 49 years and males were prone than females. Bleeding per rectum is the most frequent complaint with which Rectal malignancy patients were presented. The study also concludes that palpable rectal growth was found in 80% of patients and 72% were presented in early stage of disease. Nearly 42% patients underwent abdominoperineal resection. Outcome of surgical treatment was normal in 60% and anastomotic leak in 10%, wound infection in 20%, stromal retraction in 2.5%, death is 7.5%. A study with more number of cases is required for better understanding and management of the disease.

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