Profile of Patients With Colorectal Cancer

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ABSTRACT

Objective — *To document the profile of patients with colorectal cancer, modes of management and outcome.*

Study design — *Cross sectional prospective study.*

Place & Duration of study — *This study was conducted at DUHS & CHK Pakistan from July 2007 to June 2012.*

Methodology — *Diagnosis was confirmed on histopathology through procto-sigmoidoscopy and colonoscopic biopsy. Abdominal ultrasounds and CT scan were used to stage the disease. Treatment was planned according to the presentation. Surgical procedure was decided according to the site and stage of the tumor. Neoadjuvant chemo-radiation was given for advance and adjuvant therapy for early tumors.*

Results — *A total of 72 patients were included in the study. Majority of patients (n=29 - 40%) presented with advance disease (stage IV). Carcinoma rectum was diagnosed in 40 (55.5%) cases, sigmoid colon carcinoma in 12 (16.6%), caecal cancer in 10 (13.8%), ascending colon (n=6 - 8.3%), transverse colon and anal canal (n=2-2.7%) each. Anterior resection (APR) was performed in 20 (27.7 %) cases, low anterior resection in two (2.7%), abdomino perineal resection in eight (11%), laparoscopic assisted APR in two (2.7%), Hartmann procedure and only stoma formation in ten (13.8%) each. Histopathology confirmed poorly differentiated adenocarcinoma in 36 (50%) patients. Overall mortality was 9.7% (n=7).*

Conclusion — *Majority of the patients diagnosed with carcinoma rectum were young and presented with advance disease.*

Key words — *Colorectal cancer, Carcinoma rectum, Management.*

INTRODUCTION:

Colorectal cancer from different anatomic sites is not constant in their biological behavior, presentation, morbidity and mortality. It is more rational to divide the colorectal cancer into proximal colon, distal colon, and rectum rather than a colorectal cancer as a whole.[1] The colorectal cancer is the 3rd most frequent type of cancer worldwide in males and females.[2]

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Epidemiological, experimental and genetic studies suggest that colorectal cancer (CRC) results from complex interaction between inherited susceptibility and environmental or life style factors.[3] Patients who had colorectal cancer have 1.5-2 time increased risk of second colorectal cancer as compared to the general population.[4] Vitamin B-6 and riboflavin intakes from diet and supplements were associated with a decreased risk of CRC in postmenopausal women.[5] The present study was conducted to highlight the profile of patients with colorectal cancer and its management and outcome in our setup.

METHODOLOGY:

This was a cross sectional prospective study,

conducted at the Department of General Surgery Dow University of Health Sciences and Civil Hospital Karachi in a single unit from July 2007 to June 2012. Only those colorectal cancers that were confirmed on histopathology report were included.

The data was recorded in terms of age, gender, presenting complaints, eating habits, socioeconomic history and family history of colorectal malignancy or other malignancies. Diagnostic modalities included digital rectal examination, procto-sigmoidoscopy, colonoscopy and biopsy to confirm the diagnosis. Abdominal ultrasound and CT were used to stage the disease. Surgical treatment was planned according to the site and staging of the tumor. Histopathology reports were used to document the tumor-free margins, lymph node status and grading of the tumors. Postoperative complications follow up and mortality were also recorded. Neoadjuvant chemo-radiation was given for advance and adjuvant therapy for early tumors.

Data was recorded. Statistical package for social sciences (SPSS) version 18.0 was used to analyze the data. The mean + standard deviation (SD), median and ranges were calculated for numerical variables while frequency and percentages were computed for categorical variables.

RESULTS:

This study included 72 patients with mean age of 42.6 year (range 20-85 + 14.9 year). Majority of the patients were males (n=44 - 61.1%), male to female ratio was 1:1.7. Eighteen (25%) patients presented in emergency with intestinal obstruction, perforation and peritonitis (table I).

Table I: History

S. No	Variable	No.	Percentage
1	**Presenting complaints**		
	Altered bowel habit, abdominal pain	22	30.5
	Bleeding P/R, abdominal pain, constipation	18	25.0
	Bleeding P/R	10	13.8
	Bleeding P/R, abdominal pain, constipation, leg swelling	10	13.8
	Bleeding P/R, constipation	08	11.1
	Abdominal pain, constipation and fistula	04	05.5
2	**Diet**		
	Low fiber diet	46	63.8
	High fiber diet	10	13.8
	No fiber	16	22.2
3	**Socioeconomic class**		
	Lower class	60	83.3
	Middle class	10	13.8
	Upper class	02	02.7
4	**Positive Family history of**		
	Colorectal malignancy	4	05.5
	Other malignancy	8	11.1
5	**History of tuberculosis**		
	Pulmonary tuberculosis	8	11.1
	Intestinal tuberculosis	6	08.3
6	**Personal history**		
	Smoking	16	22.2
7	**Previous history of surgery**		
	Hemorrhoidectomy	8	11.1
	Anterior resection	6	08,3
	APR	2	02.7

Table II: Examination and Investigations

S. No	Variable	No.	Percentage
1	**Abdominal examination findings**		
	Sign and symptoms of intestinal obstruction	12	16.6
	Peritonitis	06	08.3
	Abdominal mass	12	16.6
	No positive findings	*42*	**58.3**
2	**Digital rectal examination diagnosed**		
	Rectal growth	22	30.5
	Growth anal verge	06	8.3
	Rectal ulcer	02	2.7
	Ulcer anal canal	02	2.7
	Normal finding	40	55.5
	Total	**72**	**100**
3	**Proctoscopy findings**		
	Rectal growth	30	41.6
	Growth anal canal	06	8.3
	Ulcer anal canal and rectum	04	5.5
	Normal finding	**32**	**44.4**
4	**Sigmoidoscopy positive findings**		
	Rectal growth	32	44.4
	Recto sigmoid growth	04	5.5
	Sigmoid polyp	02	2.7
	Sigmoid colon growth	03	4.1
	Sigmoidoscope cannot pass beyond10cm	05	6.9
	Anal canal involvement	02	2.7
	No pathology noticed	06	8.3
	Not performed due to emergency presentation	18	25.0
	Total	**72**	**100**
5	**Colonoscopy findings (Growth at)**		
	Rectum	30	41.6
	Anal canal and rectum	10	13.8
	Sigmoid colon	06	8.3
	Recto-sigmoid junction	04	5.5
	Sigmoid polyp	02	2.7
	Transverse colon	02	2.7
	Synchronous lesion	10	13.8
	None	**08**	**11.1**
6	**CT scan (positive metastasis)**		
	Liver metastasis	22	30.5
	Malignant ascites peritoneal metastasis	05	6.9
	Pleural effusion	02	2.7
	No distant metastasis	**48**	**66.6**
7	**Barium study**	**27**	**37.5**
	Filling defect colon	11	15.2
	Filling defect rectum	08	11.1
	Filling defect recto-sigmoid junction	06	8.3
	Fistulous communication	02	2.7
	Not performed	**45**	**62.5**

Table III: Diagnosis and Treatment

S. No	Variable	No.	Percentage
1	**Site**		
	Rectum	40	55.5
	Sigmoid colon	12	16.6
	Caecum	10	13.8
	Ascending colon	06	8.3
	Transverse colon	02	2.7
	Anal canal	02	2.7
2	**Staging**		
	Stage I	06	8.3
	Stage II	20	27.7
	Stage III	17	23.6
	Stage IV	29	40.2
3	**Pre-operative Biopsy**	**56**	**77.7**
	Poorly differentiated Adenocarcinoma	25	34.7
	Moderately differentiated Adenocarcinoma	12	16.6
	Well differentiated Adenocarcinoma	09	12.5
	Dysplastic cell	06	8.3
	Squamous cell Carcinoma	02	02.7
	Hyperplastic cell	02	02.7
	Malignant melanoma	01	01.3
	No Pre-operative biopsy	15	20.8
4	**Type of surgery**		
	Elective surgery	48	66.6
	Emergency surgery	18	25.0
	No surgery	06	8.3
5	**Surgical treatment**		
	Anterior resection	20	27.7
	Low anterior resection	02	2.7
	Hartmann's operation	10	13.8
	Stoma	10	13.8
	Abdomino-perineal resection	08	11.1
	Laparoscopic assisted APR	02	2.7
	Right hemicolectomy	04	5.5
	Anterior resection and Right hemicolectomy	04	2.7
	Subtotal colectomy	04	5.5
	Total colectomy and ileoanal pouch	02	2.7
	No surgery	06	8.3
6	**Neo adjuvant treatment**	**14**	**19.4**
	Chemotherapy	10	13.8
	Chemo & radiotherapy	04	05.5
7	**Adjuvant treatment**	**48**	**66.6**
	Adjuvant chemotherapy	45	62.5
	Adjuvant radiotherapy	03	04.1

Positive history of colorectal malignancy was found in four (5.5%) while family history of other malignancy noted in eight (11%) patients (table I).

Growth was diagnosed on digital rectal examination in 32 (44.4%), on proctoscopy in 38 (52.7%). Synchronous lesion was found in 10 (13.8%) patients. CT scan showed metastasis in the liver in

22 (30.5%) cases (table II).

Carcinoma rectum was diagnosed in 40 (55.5%) patients. Highest number of patients presented in stage IV (n=29 - 40%) as given in table III. Pre-operative biopsies confirmed carcinoma in 56 (77.7%) patients. Elective surgeries performed in 48 (66.6%) cases. Neoadjuvant chemotherapy was given to 10 (13.8%) patients. Histopathology confirmed poorly differentiated adenocarcinoma in 36 (50%) patients. Post-operative complications were wound dehiscence in 12 (16.6%), anastomosis leakage in 4 (5.5%) cases. Redo surgery was required for complications. Complications were also noticed on follow-ups for one year period. Seven (9.7%) patients died (table IV).

DISCUSSION:

Colorectal cancers are more favorable for men than women.[6] Same was seen in our series. young patients presented with more advanced disease as reported in other study.[7] Family history of colorectal malignancy has moderately increased risk of colorectal cancer, noticed in 5.5% cases as reported earlier.[8] Rectal bleeding, recent changes in bowel habits and abdominal pain are the main presenting

Table IV: Follow-up and Outcome

S. No	Variable	No.	Percentage
1	**Histopathology**		
	Poorly differentiated Adenocarcinoma Lymph node +ve	22	30.5
	Poorly differentiated Adenocarcinoma Lymph node - ve	14	19.4
	Moderately differentiated Adenocarcinoma Lymph node +ve	12	16.6
	Moderately differentiated Adenocarcinoma Lymph node – ve	04	05.5
	Well differentiated Adenocarcinoma Lymph node +ve	10	13.8
	Well differentiated Adenocarcinoma Lymph node – ve	04	05.5
	Metastatic carcinoma	03	04.1
	Squamous cell carcinoma	02	02.7
	Malignant melanoma	01	01.3
	Total	**72**	**100**
2	**Post-operative complications**		
	Wound dehiscence	12	16.6
	Wound infection	10	13.8
	Anastomosis leakage	04	5.5
	Ureteric injury	02	2.7
	Fistula	02	2.7
	DVT	02	2.7
	None	40	55.5
	Total	**72**	**100**
3	**Follow up**		
	No complication during follow up	39	54.1
	Lost to follow up	14	19.4
	Anuria	04	5.5
	DVT	03	4.1
	Recurrence	05	6.9
4	**Re do surgery**	**22**	**30.5**
	Tension suturing	12	16.6
	Stoma	06	8.3
	Ileorectal anastomosis	02	2.7
	Ureteric stent	02	2.7
	No Re do surgery	**50**	**69.4**
5	**Mortality**	**07**	9.7

symptoms seen in most of our patients. This is in conformity with literature.[9]

Patients of colorectal cancer may present through emergency with intestinal obstruction and perforation peritonitis as occurred in 25% of our cases.[10] History of hemorrhoidectomy was present in 11% cases resulting in implantation of malignant cells in the anal canal as reported in literature.[11]

Unfortunately large no of patients presented late with stage IV disease in our series as also reported by another study.[12] Anterior resection had a better quality of postoperative life than abdominoperineal resection with stoma formation.[13] Late recurrence of large peri-stomal metastasis following abdominoperineal resection of rectal cancer was seen in 2.7% cases. This showed that younger patients had an earlier recurrence and have poor survival when compared to older patients.[14] Laparoscopic assisted APR is a newer technique and has shown a better outcome and survival.[15] Role of Neoadjuvant chemo radiation in Dukes stage C disease, have been used in rectal cancer to reduce local recurrence, improve operability and allow anal sphincter preservation.[16] This was used in 19%.

Overall mortality was slightly higher in our patients (9.7%) because of late presentation of the disease. Another study showed 6.8% mortality in elective surgery while 8.2% mortality in emergency surgery.[17]

CONCLUSIONS:

Majority of our patients diagnosed with carcinoma rectum presented late with advanced stage of disease in younger age group. Bleeding per rectum and altered bowel habits were the main presenting symptoms.

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