



COLONIC CANCER; PRESENTATION AND MANAGEMENT IN A SURGICAL UNIT AT ALLIED HOSPITAL FAISALABAD

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ABSTRACT: A prospective study was conducted to see presentation and management of colonic cancer presenting to a surgical unit in a teaching hospital at Faisalabad. **Objectives:** To know different presenting symptomatology like abdominal mass, pain, intestinal obstruction, altered bowel habits, rectal bleeding, age co-relation, sex distribution, anatomic location among colonic cancer patients and management done for these patients. **Study Design:** A prospective study. **Period:** February 2009 to March 2010 for one year. **Material and Methods:** Total 8 patients were diagnosed and treated for colonic cancer presenting in a single surgical ward. Patients with age above 14 years were included in study while patients presenting with trauma and metastatic disease for other carcinoma were excluded. **Results:** Among 8 patients diagnosed for colonic cancer, age's range from 26 to 50 years at maximum, 2 patients (25 %) were males and 6 patients (75 %) were females. Only one patient (12.5%) presented with single complaint of left iliac fossa mass, 2 patients (25 %) with only single complaint of rectal bleeding as a presenting symptom while all other 5 patients (62.5%) presented with more than one or two symptoms at the same time. Among 5 patients presented with more than one symptom all had presented with abdominal mass associated with additional symptoms like, one patient (12.5%) developed intestinal obstruction with left sided abdominal mass, another one patient (12.5%) left sided abdominal mass with alternate diarrhea and constipation, another one patient (12.5%) right sided mass with pallor, one patient (12.5%) had constipation with left sided mass while another one patient (12.5%) developed abdominal pain, weight loss and palpable left sided abdominal mass. Patients were staged according to TNM staging system. All patients were above stage II and Dukes B. All patients were operated in Surgical Unit II at Allied Hospital Faisalabad. Left hemi-colectomy was done for 2 patients; right hemi-colectomy was done for single patient presented with mass and anemia on right side, sigmoid resection with colostomy for one patient, Hartmann's procedure for another one patient and single stage resection with primary anastomosis for one patient. 2 patients underwent abdomino-perineal resection with end colostomy. **Conclusion:** This study tells that majority of the patients with colon cancer presented with left sided abdominal mass and other associated symptom, the age's range from 26 to 50 years. Disease affected 6 females out of total 8 patients. Two patients underwent APR with end colostomy while other patients were treated with alternate procedures like primary anterior resection with anastomosis or end colostomy.

Key words: Colon cancer, altered bowel habits, bleeding per rectum, mass abdomen, Hartmann's procedure, colostomy, tenesmes, Abdomino-Perineal-Resection (APR).

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INTRODUCTION

Colo-rectal cancer is the third most common type of cancer all over the world.¹ Abnormal growth of cell invading colon and spreading to other parts of body² presents with different symptomatology like abdominal mass, abdominal pain, altered bowel habits, weight loss, pallor, bleeding per rectum and intestinal obstruction.³ Genetic^{4,5}, diet and advancing age^{4,5} are contributing factors for the development of colon cancer. Alcohol abuse^{4,14},

red meat^{4,5}, inflammatory bowel diseases^{4,15,16,17}, obesity, smoking^{4,5}, lack of physical exercise^{4,12}, male gender¹³ and animal fat⁵ are major risk factors.

More than 75% to 95% cases of colonic cancer are non-genetic.^{12,13} The genetic disorders associated with high risk are Hereditary Non-Polyposis Colonic Cancer (HNPCC), Gardner's Syndrome¹⁸ and Familial Adenomatous Polyposis (FAP).^{4,5,19}

Right sided colon cancer usually presents with anemia¹¹ and abdominal mass while left sided colon cancer presents with abdominal mass, altered bowel habits, weight loss¹¹ tenesmes, incomplete evacuation, constipation¹⁰ intestinal obstruction and bleeding per rectum.^{10,11} Microscopically the tumor is adenocarcinoma (more than 95%) that may invade mucosa, muscularis mucosae, sub-mucosa and muscularis propria.

The screening and diagnostic tools for colon cancer are fecal occult blood, flexible sigmoidoscopy, colonoscopy^{6,20}, bowel imaging, endoscopy and contrast enema. Screening is recommended at the age of 50 years⁶ in non-familial cases while it should be started at 40 years¹³ in patients who have family history.

TNM staging¹³ from WHO is now-a-days gold standard for colonic cancer staging and Dukes or Astler-Coller classification are less used.

Management of colon cancer is multifactorial and aimed as cure or palliation. Surgery is curative in localized cancers.¹ Combination of surgery, chemotherapy and radiotherapy with palliative care is the mainstay of advanced cases that have metastasized to lymph nodes. Majority of colon cancers are preventable with change in life style, high intake of whole grains, vegetables, fruits and less consumption of red meat. Aspirin^{4,7} and celecoxib decreases the risk although not recommended⁸ as regular preventable drugs.

Five year survival for colon cancer is less than 65 %⁹ and is related to type of cancer, metastasis and time of detection.

5 Years stage wise survival	
Stage	% 5 years survival
1	70- 90 %
11	50- 65 %
111	35- 60%
1v	Less than 15%

MATERIALS AND METHODS

This study was conducted in Surgical Unit II at Allied Hospital Faisalabad which is a 1440 bedded

teaching hospital. The period of study was for one year from February 2009 to March 2010. All the patients presenting with abdominal symptoms were sorted out and diagnosed cases of colonic cancers were included in this study. Children up-to 14 years were excluded. Detailed history of presenting illnesses, family history, social history and detailed dietary habits were recorded. Physical examination, digital rectal examination and proctoscopy were performed.



Proctoscopy picture showing mass in lower rectum Plain abdominal x-rays, barium enema, double contrast enema, sigmoidoscopy and colonoscopy with biopsy were taken. Ultrasound abdomen with pelvis and CT scan were done for all patients. All patients were operated in Surgical Unit II at Allied Hospital Faisalabad. Right hemicolectomy, left hemi-colectomy, sigmoid resection, Hartmann's procedure and end colostomy with abdomino-perineal resection were performed. Post operatively patients were sent for chemo-radiotherapy. No mortality was recorded during surgery and one year post-operative follow up.

DISCUSSION

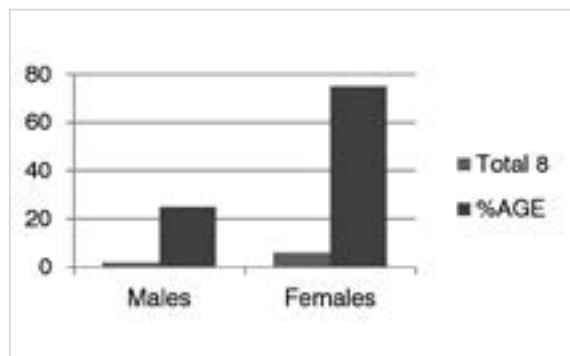
A total 8 patients were diagnosed as colorectal cancer with different presentations. Out of these 8 patients 5 patients (62.5%) presented with mass abdomen and other symptoms at the same time while only one patient (12.5%) 32 years old female presented with alone left iliac fossa mass. Among the patients those presented with combined symptomatology were as follows. One

patient (12.5%) 41 years old male developed intestinal obstruction with abdominal mass, another one patient (12.5%) 43 years old female with abdominal pain, weight loss and mass in left upper abdomen. Another 26 years old female (12.5%) presented with alternate diarrhea and constipation and left sided abdominal mass.

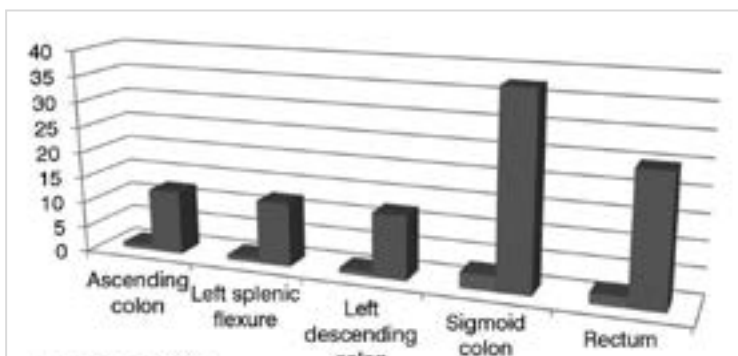
Only one 48 years old female patient (12.5%) presented with anemia and right sided abdominal mass. A 50 years old male (12.5%) presented with left sided mass and absolute constipation. Two patients, (25%) 39 years and 49 years old females were presented with only bleeding per rectum.

Symptom	No of pt.	Sex	Age in years	Region affected	Level of colon affected	Procedure
Abdomen mass alone	1	Female	32	LIF	Sigmoid	Hartmann's procedure
Mass + intestinal obstruction	1	Male	41	LHC	Left splenic flexure	Left hemi-colectomy
Mass + pain + wt. loss	1	Female	43	Left upper abdomen	Left descending colon	Left hemi-colectomy
Mass + altered bowel habits	1	Female	26	LIF	Sigmoid colon	Resection sigmoid + colostomy
Mass + anemia	1	Female	48	RHC	Ascending colon	Right hemi-colectomy
Mass + constipation	1	Male	50	LIF	Sigmoid colon	Single stage resection + primary anastomosis
Bleeding per rectum	2	Female	49	N/A	Rectum	Abdomino-perineal resection + end colostomy
		Female	39	N/A	Rectum	Abdomino-perineal resection + end colostomy

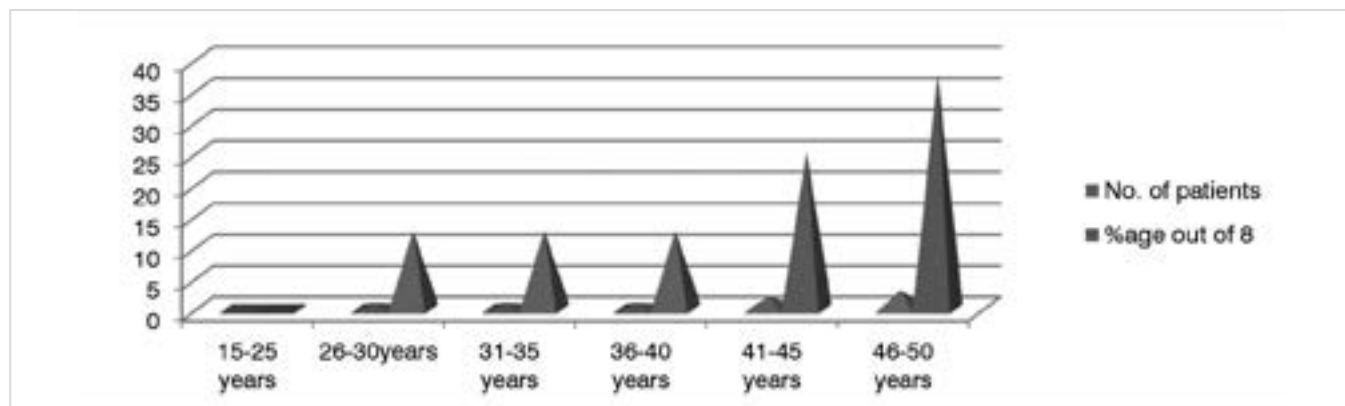
Table



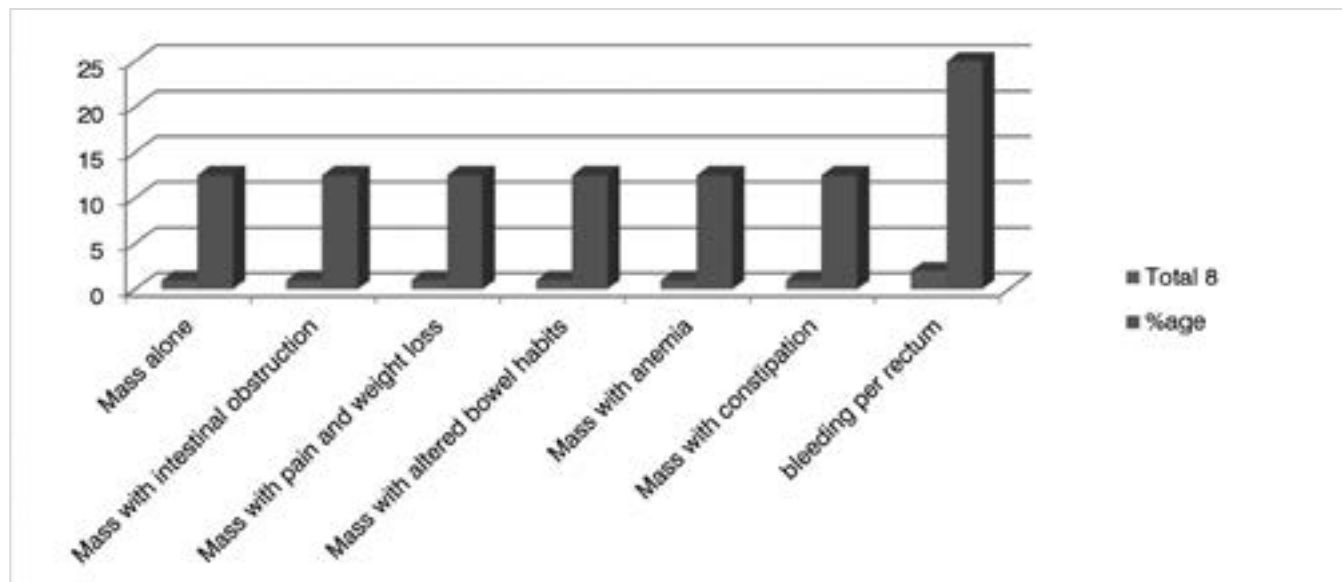
From above data the following chart can be plotted for different % age of sex distribution.



Following chart indicates site of colon involvement



Age ranges from affected group in this study can be plotted as such.



This is the presenting symptomatology chart that is drawn from above research.

If we compare this study with different internationally conducted research work it is like this. The sex distribution of colorectal carcinoma is almost same in both sex²² internationally but in this study females and male ratio is 3:1. In this study all patients are up to 50 years of age although it is contrary to worldwide occurrence of colon cancer but now this is increasing in younger age groups as well.²¹ As for the site of lesion is concerned in this study about 75 % of patients have left sided lesions while worldwide 58% of lesions are distal to the splenic flexure.²⁵ If we consider patients presenting with different symptomatology the patients presented with rectal bleeding in this study are 25% while international figures are 20-58%.^{23,25} The prevalence of intestinal obstruction was 3-21%²⁵ internationally while in this study one patient 12.5% presented with intestinal obstruction of left sided lesion well correlate internationally. The change in bowel habits with abdominal pain accounts for 27.3%²⁸ in some studies while it is 25% in this study. Mass alone is very rare presentation in different international studies and is 4-6%²⁹ of diagnosed rectal cancer cases also in this study only patient 12.5% mass alone presented while mass with other combined symptoms is a frequent presentation internationally from 25 to 60%³⁰ of cases as is also evidenced in this study about 75% of cases.

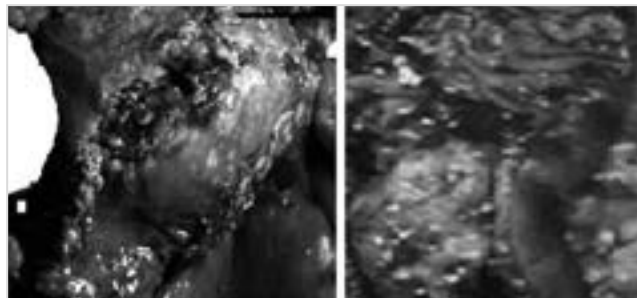
Patients were staged under WHO TNM staging classification.

TNM staging for colorectal cancer

Stage	TNM
1	T 1-2, N0 , M0
11	T 3-4, N0 , M0
111	T any, N 1-3, M0
1V	T any, N any, M1

All patients were above stage T 2, two patients had N- O, all other N 1-2 and no patient had M-1 or metastasis.

All patients were operated in surgical Unit II at Allied Hospital Faisalabad.



Gross pictures of two patients affected colon

Left hemi-colectomy was done for 2 patients, the one with 41 years old male patient presented with intestinal obstruction and abdominal mass and

another one 43 years old female patient presented with abdominal pain weight loss and palpable mass left upper abdomen. Right hemi-colectomy was done for single 48 years old female patient presented with mass and anemia on right side. Sigmoid resection with colostomy was done for 26 years old female patient presented with mass and alternate diarrhea and constipation. Hartmann's procedure was done for 32 years old female patient presented with mass left iliac fossa diagnosed as cancer sigmoid colon. Single stage resection with primary anastomosis was performed for 50 year male patient presented with constipation and mass abdomen patient. Two females 49 years and 39 years old patients presented with rectal bleeding, underwent abdomino-perineal resection with end colostomy. Worldwide it has been established that surgery is primary treatment for colonic cancer and the different procedures performed depends on the site, stage and survival rate of the disease and these procedures²⁶ are anterior resection with primary anastomosis, end colostomy and abdomino perineal resection as mentioned in this study with chemotherapy and radiation well coincide with this study.²⁷

RESULTS

Among 8 patients diagnosed for colonic cancer, between 26 to 50 years of age at maximum, 2 patients (25%) were males and 6 patients (75%) were females. Only one patient (12.5%) presented with single complaint of left iliac fossa mass, 2 patients (25%) with only single complaint of rectal bleeding as a presenting symptom while all other 5 patients (62.5%) presented with more than one or two symptoms at the same time. Among 5 patients presented with more than one symptom all had presented with abdominal mass associated with additional symptoms like, one patient (12.5%) developed intestinal obstruction with left sided abdominal mass, another one patient (12.5%) left sided abdominal mass with alternate diarrhea and constipation, another one patient (12.5%) right sided mass with pallor, one patient (12.5%) had constipation with left sided mass while another one patient (12.5%) developed abdominal pain, weight loss and

palpable left sided abdominal mass. All patients were operated in surgical Unit II at Allied Hospital Faisalabad. Left hemi-colectomy was done for 2 patients; right hemi-colectomy was done for single patient presented with mass and anemia on right side, sigmoid resection with colostomy for one patient, Hartmann's procedure for another patient and single stage resection with primary anastomosis for another patient. Two patients underwent abdomino-perineal resection with end colostomy.

All patients presented with symptomatology of colon cancer were above the age of 26 years the eldest being 50 years. No mortality happened during this one year period. All patients had been given chemo-radiotherapy post operatively.

CONCLUSION

This study demonstrate that colon cancer is a multi-factorial disease mainly develops from non-genetic factors, increasing in frequency among younger age groups, presents mainly with abdominal mass, rectal bleeding, anemia, weight loss and intestinal obstruction as a single or combined symptomatology, treated by surgery, chemotherapy and radiation.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

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