Colorectal Carcinoma: Age & Sex Incidence and Mode of Presentation in 73 patients - a Hospital Based Study

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Seventy-three patients of colorectal cancer were treated during the last five years (Aug, 1993 to July, 1998) at Nishtar Hospital Multan. Out of these 73 patients forty (55%) were male and thirty-three (45%) were females, and male to female ratio was 1.2:1. Bleeding per rectum was the most common clinical presentation (82%), followed by Anaemia (65%), Altered bowel habit (42%), Mass left iliac fossa (20%), Mass right iliac fossa (18%), Intestinal obstruction (15%) and tenesmus (10%). Carcinoma most commonly involved rectum (40%) followed by sigmoid colon (20%) and caecum (20%). Per rectal digital examination was accurate in 75% of rectal tumours and in 35% of all large bowel tumours. Procto-sigmoidoscopy was effective in 50% of the colorectal tumours while double contrast barium enema in 75% and colonoscopy in 90% of the patients suffering from colorectal carcinoma. At initial presentation, twenty patients were in Duke's stage A, thirty-two in Duke's stage B, eighteen patients in Duke's stage C, and just three patients in Duke's stage D. Abdominoperineal resection was the most common procedure offered to these patients followed by Right hemicolectomy (20%) and Left hemicolectomy (11%).
Key words: Colorectal carcinoma, hemicolectomy, abdominoperineal resection

Colorectal carcinoma is one of the most common malignancies in southern Punjab. This prospective study was undertaken to document the age & sex incidence and mode of presentation of colorectal carcinoma.

Patients and methods:
All the patients with colorectal malignancy admitted in the Nishtar Hospital Multan from August 1993 to July 1998 were included in this study. All these patients were 15 year and above. The patients in whom histopathology was negative or those who disappeared from the ward before operation were excluded from the study. A through clinical examination, per rectal examination, proctosigmoidoscopy and biopsy was done in every case. Colonoscopy was performed in selected cases that were admitted through OPD and in whom proctosigmoidoscopy was unremarkable and it revealed colonic tumors with the accuracy of 90%. The haematological tests including, complete blood counts (showing anaemia in 75% and raised ESR in 100% of the patients), blood urea, blood sugar, serum electrolytes, CEA (increased levels in all the patients), stool examination and urine examination were performed. Radiological investigations included chest X-ray plain X-ray abdomen in erect and supine positions, IVU (showing hydronephrosis in 05 out of 20 patients), and double contrast barium enema (with the efficacy of 75%). In addition to the above-mentioned investigations abdominal ultrasound and CT scan (with efficacy of 60%) were also done to assess the extent of growth and to rule out the metastasis. Liver scan was done in few cases where CT scan was doubtful and it showed metastasis in eight out of ten patients. Endoluminal ultrasound could not be performed due to non-availability.

Staging and grading of the disease (as shown in tables VI & VII) was done by clinical examination, investigations and histopathological reports of biopsy material. Preoperative preparation was done in non-obstructive cases by liquids, low residual diet, colonic wash outs and enemas. On table lavage was done in obstructive cases. Patients were counseled regarding the application of colostomy bags and colostomy care. Perioperative antibiotics included 3 doses of metronidazole and second-generation cephalosporins. Various procedures in these patients are shown in table I.

Results
Total number of the patients was 73. Male to female ratio was almost 1.2:1 as shown in table II. The age range was 16-70 years. The youngest patient was a 16 years old boy who presented with bleeding per rectum; the oldest was a 70 years old man. The highest incidence was between the ages of 30-40 years 42% as shown in table III.

Table 1. The operations performed

Operations	N	%age
Elective	56	
Abdominoperineal resection	24	43
Right hemicolectomy	09	16
Resection anastomosis with colostomy	08	14
Anterior resection	04	07
Hartman's procedure	03	05
Left hemicolectomy	08	14
Emergency	17	
Hartman's procedure	03	18
Right hemicolectomy	07	41
Primary resection with colostomy	07	41

The most accurate diagnostic tool was found to be colonoscopic biopsy with accuracy 90%. The commonest site of tumour was rectum (40%), followed by sigmoid colon (20%) and caecum (20%) as shown in table IV. The main presenting features were bleeding per rectum (82%), anaemia (65%), altered bowel habits (42%), mass left iliac fossa (20%), mass right iliac fossa (18%), intestinal

obstruction (18%), and tenesmus (10%). The histopathology revealed adenocarcinoma in all these patients (100%).

Table 2. Sex incidence

Sex	No. of cases	%age
Male	40	55%
Female	33	45%

M/F ratio= 1.2:1

Table 3. Age incidence

Age group	Cases	Percentage
Less than 20 years	01	1.4%
20-40 years	15	20%
40-60 years	30	41%
Above 60 years	27	36%

Mean age = 45 years

Most of the patients were in Duke's stage B (n=32, 44%) followed by Duke's stage A (n=20, 27%), Duke's stage C (n=18, 25%) and Duke's stage D (n=3, 04%).

Postoperative complications are shown in table-V. Abdominal wound infection was the commonest complications, occurring in 17 out of 73 patients, followed by chest complications, DVT and colostomy related complications.

Postoperative follow up included history, physical examination, investigations including CEA. The youngest patient 16 years old boy reported back within a year with extensive metastasis. Four other patients reported with metastasis within the first year of the follow up. The mortality in elective cases was 2 out of 56 (3.6%) and in emergency cases it was 05 out of 17 (29%). The cause of death in all these patients was postoperative anastomosis leakage and septicaemia.

Table 4. Site of tumour

Site	Cases	%age
Rectum	29	40
Sigmoid	15	20
Caecum	15	20
Transverse colon	08	11
Descending colon	05	07
Ascending colon	01	1.3

Table 5. Postoperative complications

Complications	n	%age
Wound infection	17	23
Deep venous thrombosis	02	03
Anastomotic leakage	07	09
Colostomy prolapse	01	1.4
Colostomy stenosis	01	1.4

Table 6. Staging of colorectal carcinoma

Stage-A	Tumour confined to the bowel wall
Stage-B	Tumour extending to perirectal tissue
Stage-C1	Only regional nodes involved, upward spread not reaching the point of ligature or blood vessels
Stage-C2	Nodes at the point of ligature involved

Table 7. Classification of grade of malignancy in colorectal cancer

Broder	Histopathology	Dukes's
Grade-I	Active epithelial proliferation with infiltration of muscularis mucosae resembling an adenoma	Low grade malignancy
Grade-II	Crowded cells with regular arrangement, frequent mitosis	Average grade malignancy
Grade-III	Less differentiation with increase mitosis, crowded in irregular rings	High grade malignancy
Grade-IV	Anaplastic with no glandular arrangement, evidence of deep invasion with columns of cells	High grade malignancy

Discussion

Colorectal cancer is one of the commonest tumours in the both sexes[17, 18]. There are about 17000 deaths annually in UK from this disease[16]. Colorectal cancer is said to be a disease of old people[25] but it is fairly common in early adult life (30%)[14, 15]. In our study mean age of presentation was 45 years, which is less as compared to the other studies, 51years[29] 48 years[27]. Colorectal cancer is the 6th and 7th commonest disease in male and female population respectively in out country[13]. The sex incidence is almost 1.2:1in our study which is different (1.86:1) [26] and Saudi studies (1.89:1, 2.24:1) [27,28]. Most common site in our study was rectum followed by caecum and sigmoid which is exactly similar to the study conducted by Nadira Mamoon et al[29]. Similarly bleeding per rectum followed by anaemia was the most common presentation in our study, which is comparable to the other studies[4, 9, 10]. The disease is more common in Pakistan as compared to the other countries of Europe and Asia, and it is said to be due to increased consumption of animal fat[1]. In addition to the dietary factors, other predisposing conditions are colorectal polyps, familial polyposis coli, radiation proctocolitis, ulcerative colitis and schistosomiasis.

The proportion of the patients presenting with emergency manifestations of colorectal cancer has remained fairly constant at about 15-20% for obstruction and 3-8% for perforation over the last decade[10, 12]. Emergency presentation of the tumour means an advanced disease. Thus the overall resection rate is considerably low in emergency surgery (55%) as compared to 92% in elective cases. Morgan and Buttler showed resectability rate of 96.5% and 96% respectively[8, 9].

The emergency resection followed by primary ileocolic anastomosis is generally accepted as the treatment of choice for obstructed and perforated tumours of the right colon even in the presence of small bowel distention and poretonitis[6, 7, 12]. However for the left colon most of the surgeons prefer staged operation over primary resection and anastomosis. Resection and primary anastomosis

carries a high mortality rate[5]. Keeping this in view, staged operations were carried out in our study. The dangers associated with recently obstructed bowel may be reduced by on table lavage or by extending the resection to the rest of the colon and performing an ileo-rctal anastomosis. However these procedures prolong the operation time, which may increase the mortality and morbitity[4]. The prognosis of the patients undergoing palliative procedures (surgery, radiotherapy and chemotherapy) is very poor[2, 3, 11]. Recently local resection If the colorectal cancer is greatly stressed. It is said that if the tumour is mobile, less than 3 cm in size, well differentiated and confined to the mucosa and submucosa (on endoluminal ultrasound) local excision should be offered to these patients[19, 20, 21]. Relative indications for the local resection of the colorectal tumours are the lesions involving muscularis, more than 3 cm and poorly differentiated. However local fixity is contraindication for local resection of the tumours[22, 23]. At Nishtar Hospital Multan this practice is not being carried out due to non-availability of the endoluminal ultrasound and equipment required for the local excision of the tumour. Surgery provides the best form of cure and palliation in colorectal carcinoma. For curative resection our aim should be to remove the macroscopic portion of the tumour, the adjacent bowel (which shares the common blood supply), and the involved lymph nodes.

Curative surgery can also be carried out if there are 1-3 metastases in the liver, in which case partial lobectomy or hemihepatectomy can be carried out.

If colorectal tumour is just locally advanced, it can be downgraded by radiotherapy or chemotherapy, and then curative surgery can be carried out. In case of rectal tumours, if just 2 cm distal free margin is available, anterior resection is carried out, however radiotherapy should be offered postoperatively if margins are positive or the tumour is of low grade.

Adjuvant combination chemotherapy is preferred over previously used 5FU for stage B and C. Recently 5FU and Leucovorin is the combination chemotherapy of choice[24]. .

In our study surgery was the main treatment of choice whether curative or palliative, which is again more or less similar to the other studies[7, 9, 11,12]. Postoperatively these patients were referred to the Oncology department for adjuvant chemotherapy or radiotherapy.

Follow up

As far as the follow-up is concerned, only 40 patients out of 73 are reporting regularly. This is because most of our patients are village dwellers and belong to low socioeconomic group. Lack of health education is another important factor. However study is still undergoing and the results will be published later on.

Conclusion

In this study, patients with colorectal carcinoma were much younger as compared to their western counter parts. Tumour is very aggressive and advanced at the time presentation. So in younger age group, thorough investigations and immediate treatment should be offered to these patients.

Regarding sex, male to female ratio is more or less similar to the other studies.

Bleeding per rectum was the most common clinical presentation.

Most of these patients were under treatment of Quacks, Hakeems and even doctors for haemorrhoids with out doing per rectal examination and proctoscopy. So it is suggested that every patient presenting with bleeding per rectum, per rectum examination and proctoscopy should be the primary steps. Moreover need for health education especially in rural areas cannot be over emphasized.

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