Section: General Surgery

Original Research Article

A STUDY OF NEOPLASTIC LESIONS OF COLORECTUM IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Background: A wide variety of lesions affect the colon, including neoplastic and non-neoplastic. The clinical diagnosis is usually delayed due to vague symptoms. Colorectal cancer is the 3rd most common tumor type worldwide, and one of the leading causes of cancer related deaths. Pathological examination of biopsy and resected specimens are of crucial for determining the extent of disease, patient management and prognosis assessment. **Aim:** An observational study on colorectal malignancy pertaining to natural history of disease, etiology, mode of presentation, site of occurrence, mode of treatment, prognostic factors and outcome of treatment.

Material and Methods: It was an observational study carried out during the period from June 2017 – September 2020 at Kakatiya Medical College.

Results: Mean age of incidence for carcinoma colon was 54.2 years with a major Clustering patient in the 41-70 years age group. The incidence of carcinoma colon was more among male with female ratio of 1;8;1. Most often it presents as chronic abdominal pain. Determination of CEA level alone is not conclusive for the early detection of colon cancer but it is useful in postoperative follow up. CEA level do not Correlate with stage of disease but high values of CEA are indicative of either metastatic disease or inoperable tumors. Colonoscopy is investigation of choice. Ultrasound can be used as diagnostic modality; as colonic wall thickness Can be made earlier to clinically palpable mass. Large number of patients came with advanced disease either with AstlerColler B_2&C_2. Radical surgery as treatment of choice whenever possible. The objective of surgery for colon cancer is removal of the primary tumor with adequate Margins. Regional lymphadenectomy and restoration of the continuity of the gastrointestinal tract by anastamosis. In the present study Histopathological examination revealed adenocarcinoma mostly of well Differentiated variety. The most common postoperative complication was due to sepsis.

Conclusion: Malignant neoplasm is a more common than benign neoplasm in the colon. The most common neoplastic lesion is the adenocarcinoma of colon.

Key words: Adenocarcinoma, Adenoma, Colon, Neoplasm, Polyp.

INTRODUCTION

Colon carcinoma is one of the leading cause of death in the western world. In India, though the incidence is low, an increasing trend with urbanization may be seen.

Carcinoma of the colon is occurring with increasing frequency in the elderly. There are various factors to account for increased incidence in some geographical area.

Screening techniques are not widely used, but if patient over 50 years with altered bowel symptoms are submitted to a battery of investigations including sigmoidoscopy, colonoscopy and Barium enema a higher detection rate will result. The best method of evaluation is colonoscopy Major advances have been achieved in the understanding of the underlying molecular events leading from a benign adenoma to

invasive carcinoma and have been translated into clinical use to better determine surveillance program strategies as well as prognosis and therapy in the patient with carcinoma colon.[1,7]

The measures available to combat colonic cancers are primary and secondary prevention.

Primary prevention involves the manipulation of the environmental factor suspected of playing Causal roles.

Early detection of cancer and the identification and eradication of pre- malignant Lesions are the goals of secondary prevention.

Surgery remains the main modality of treatment in carcinoma colon Probably in no other cancer does surgery provides as much benefit as in carcinoma colon, the antibiotic era and improved pre and post-operative care have diminished operative morbidity and mortality to acceptable levels.

Aim of Study

An observational study on colorectal malignancy pertaining to natural history of disease, etiology, mode of presentation, site of occurrence, mode of treatment, prognostic factors and outcome of treatment.

To study various treatment modalities given at Kakatiya Medical College and their outcome with reference to quality and quantum of life.

MATERIALS AND METHODS

Period of study: June 2017 – September 2020.

Observation study on cases with colorectal carcinoma.

Number of cases taken for the study: 37

Materials

1. Clinical evaluation

a) Age incidence

b) Sex incidence

c) Presenting features

1. Pain,
2. Mass,
3. Obstruction,
4. Bleeding
5. Anemia.

Time of Presentation

Clinical Examination

1. General condition of the patient evaluated. Presence of features like anemia, lymphadenopathy, pallor, Jaundice were noted. Examination of the cardiovascular, respiratory and skeletal system to find out metastasis was done. Thorough examination of the abdomen looking for distention, obstruction features, mass, Ascitis were done. Per rectal examination to diagnose ano-rectal growth, obstruction and pelvic deposits were done.

Investigations

a. Hemoglobin estimation
b. Chest X-ray
c. Plain X-ray Abdomen
d. serum potassium,
e. e.LFT.
f. USGAbdomen
g. Bariumenema
h. Colonoscopy / Sigmoidoscopy
i. CT Scan abdomen in selected cases.
j. Biopsy

Treatment

Based on the investigation and clinical findings patients were taken up for the following modalities of treatment

1. Curative surgery.
2. Palliative surgery
3. Chemoradition

Combination of surgery and chemotherapy.

Surgery chemo and RT

Preop RT Surgery

Type of surgery performed varied from definitive colostomies, staged procedure in which initially Hartman's procedure was carried out and Later definitive surgery was performed and APR, Intra operatively the patients were examined for site of growth, serosal involvement, liver and peritoneal involvement and free fluid. Pre op and post op chemo radiation were given in selected cases. Bowel preparation with pegleg and soap and water enema was done in all the cases presenting without obstruction pre op antibiotics were given.

Patients were monitored in the post-operative period and treated with 1v fluids, analgesics and antibiotics. All the patients who underwent extensive surgery in whom severe pain is expected were provided analgesia through epidural route for 2 days when prolonged immobilisation is anticipated injection heparin 5000 units given subcutaneously for 5 days and all the patients were encouraged to walk from the 3rd postoperative day to prevent deep vein thrombosis and complications noted.

Follow up

All the patients were followed up for a mean period of 6 months most of them as out patients few of them as in patients. During the follow up the patients were carefully examined for presence of metastatic features thorough history physical examination and investigations like chest x-ray, fecal occult blood testing, CEA, ultra sound and CT scan were done according to the time of presentation and symptomatology.

All the information collected was pooled and master chart prepared, from which analysis of the disease was done and conclusion arrived.

Adjuvant therapy

Adjuvant chemo RT started after 3 weeks of surgery. chemotherapy was given with 5 fu and cisplatin. Radio therapy is given in the form of external beam RT.

RESULTS

Table 1: Age distribution of patients

Age group	No. of Patients	Percentage
10 – 20	1	2
20 – 30	4	11
30 – 40	8	22
40 – 50	9	24
50 – 60	5	13
60 – 70	8	22
70 – 80	2	5
Total	37	100

Majority (46%) of cases presented at the age of 30 – 50. Next peak occurring in 60 – 70 age group which comprises of 22%. No patient was < 19 years old or > 76 years old. 13% of cases occurred in II and III decades of life.

Table 2: Sex incidence

Sex	No. of Patients	Percentage
Female	22	59%
Male	15	41%

15 out of 37 patients were females which accounted for 59%. 41% were males (M: F :: 2:3). Higher incidence of colorectal ca in females may be attributed to genetic or dietary habits.

Diatery habits: Over 90% of patients were non-vegetarians. Predominately they consume rice, consume non vegetarian diet once or twice in a week. Majority of them chew betel leaves with calcium which is protective for colorectal cancer.

Table 4: Mode of Presentation

Mode	No. of patients	Percentage
Pain	29	78%
Mass	8	21%
Obstruction	13	35%
Ascites	8	21%
Liver Secondaries	10	27%
Anemia	13	35%

PAIN is the most common mode of presentation in this group of patients. 35% of the patients presented with the obstruction followed by 21% each with mass and Ascites. Pain may be tenesmus in rectal carcinoma and colicky pain in intestinal obstruction and 1 patient presented with neuralgic pain due to involvement of lumbar plexus. 4 patients presented with dysuria due to bladder involvement.

27% of the patients were terminally ill with liversecondaries. 35% of the patients presented with pallor with Hb% < 9gms occurring due to generalised debility or bleeding perrectum.

Table 5: Site of Tumour

Site	No. of Patients	Percentage
Ascending colon	4	11%
Descending colon	2	5%
Hepatic flexure	2	5%
Splenic flexure	1	2%
Transverse colon	1	2%
Sigmoid colon	1	2%
Proximal rectum	1	73%
Middle rectum	5	
Distal rectum	15	

Carcinoma is particularly common in the distal rectum. Again there is a significant number of (16) cases in Ascending and Hepatic flexure.

Table 6: Involvement of surrounding structures

Organ	No. of patients	Percentage
Bladder	7	18%
Vagina	1	2%
Others – Omentum, Mesentry, Small Bowel	5	7%

Involvement of surrounding organs was seen in 27% of cases. In 7 out of 37 there was involvement of posterior wall of bladder only in 1 case posterior vaginal wall was involved Omentum, Mesentery,

Small Bowel were involved, in 5 other cases. growth and infiltration is more common in the anterior wall of rectum than in the posterior wall. Out of 7, 3 presented with hydroureteronephrosis.

Table 7: Duke's Stage

Duke	No. of patients	Percentage
Duke A	1	3.3%
Duke B	9	30.7%
Duke C	20	66%

66% of patient presented with Dukes stage C only, 1 patient was detected in Duke stage A, 9 patients were detected in Duke Stage B.

Indicating fairly late presentation to the hospital for which only palliative treatment is possible.

Investigations

1. **Barium enema** was done in 19 cases findings correlated with other findings in all the cases. Indicating a high degree of sensitivity and specificity.
2. **Serum potassium** was done in 25 cases, all the cases showed values within normalrange.
3. **Blood grouping** was done in all 37 cases which revealed 32.4% of the patients with blood group 'O' and A, B and AB group account for 21.6%, 29.7% and 16.2%respectively.
4. **PR Examination** was done in 36 cases and it is highly sensitive in detecting rectal growth in ourseries.
5. **Chest X-ray** taken for all the patients except one. It revealed lung secondaries in one patient and pleural effusion in 4 patients. One patient showed increased bronchovascular markings. It was normal in rest of thepatients.
6. **Colonoscopy / Sigmoidoscopy**was done in 22 patients all yielded positive results and biopsies weretaken.
7. **Liver function test** was done in 11 cases in whom liver involvement was suspected and was found to be deranged in 4 patients.
8. Since most of the patients presented with clinically (or) Radiologicalydedectabletumour mass **faecal occult bloodtest** was not doneroutinely.

Table 8: Type of Carcinoma

Type	No. of patients	Percentage
Moderately differentiated Adeno carcinoma	18	51%
Poorly differentiated adeno carcinoma	5	14%
Well differentiated adeno carcinoma	7	20%
Amelanotic melanoma	2	5%
Others	3	8%

More than 51% of cases were moderately differentiated adenocarcinoma. 14% of poorly differentiated and 20% of well differentiated adenocarcinoma were present. 2 cases were reported as amelanotic melanoma. 2 were squamous cell carcinoma and 1 signet cell carcinoma were reported.

Table 9: Type of Surgery tabulation for the study group

Elective	**15**	**60%**
Emergency	10	40%

60% of cases were taken as elective cases with bowel preparation and 40% of cases was taken as emergency surgery. In the elective cases complications like post op wound infection, obstruction or retraction of colostomy was present in only 12% of cases. Where as in emergency cases 16% of cases had above complications. The outcome was almost identical after the immediate post op period in both thegroups.

Table 10: Type of Treatment given

Treatment	No. of patients	Percentage
Colostomy	7	19%
APER	11	30%
Hemicolectomy	6	16%
Symptomatic	2	5%
Curative chemo RT	14	38%
Palliative Chemo RT	9	24%

30% patients underwent APR. 19 patient underwent colostomy most of which were sigmoid loop colostomy. 4 patient with APR and 3 patients each with colostomy and hemi colectomy underwent pre or post op chemo radiation therapy. Neo adjuvant chemo RT was given for 11 cases 3 cases received post op chemo RT. 9 patients were given palliative chemoRT.

Radiotherapy is given in the form of external beam RT in a dose of 35 – 40Gy in divided doses over 1

month period. 6 cycles of chemotherapy is given with cisplatin (100 – 200mg/m2/dose IV every 3 to 4 weeks) and 5 FU (600mg/m2/IV 1st and 8thday).

Table 11: Complications

Complications	Number	Percentage
Wound infection	3	12
Obstruction	1	4
Delayed wound healing	1	4
Bleeding from colostomy	1	4
Prolonged ileus	1	4
Others	1	4
Total	**8**	**32**

Out of 25 cases operated 8 patients developed complications, out of which 12 % of cases developed wound infection for whom daily dressing and secondary suturing done. One patient developed obstructive features which got releived on giving enema through colostomy. Delayed wound healing, bleeding from colostomy and prolonged ileus were other complications noted which got corrected with conservativemanagement.

Follow up

Out of 37 patients who underwent treatment. 26 patients came for follow up. During the follow up patients were examined with careful history and physical examination pertaining to detecting metastasis or local recurrence. Patients were subjected to faecal occult blood testing, Chest X-ray, Colonoscopy, LFT, ultra sound and CT depending upon the symptoms and duration after surgery. CEA analysis was not done routinely in the follow up period since the patients were not affordable for the investigation.

2 patient developed local recurrence for whom USG at 3 months revealed normal study and 6 months showed multiple pelvic deposits with liver involvement. Findings were confirmed with CT scan and they received palliative radiotherapy, 1 had mild retraction of the colostomy but functioning well.

1patient had infiltration in the lumbo sacral plexus with severe neuralgic pain for whom palliative chemo RT given. For this patient chest X-ray was normal and CT scan of pelvis showed infiltration into the sacrum and surrounding structures. 1 patient with rectal carcinoma presented with massive acitis and pleural effusion for whom examination revealed lung secondaries and liver secondaries findings were confirmed with Chest X-ray CT abdomen and thorax and LFT and was managed symptomatically.

1patients presented with subacute obstruction which got relieved by enema. Colonoscopy through colostomy was done for these patients which was normal study. Rest of the patients were asymptomatic during the follow upperiod.

Total no. of patients	**26**
Asymptomatic	15
Local recurrance	3
Dissemination	1
Sub acute obstruction	2
Pelvic pain	5

DISCUSSION

In Kakatiya Medical College colorectal carcinoma accounts for 2.5% of all the cancer cases.

Age Incidence

Colorectal carcinoma affects predominantly younger age group patients than the older ones compared with the western population. In this study 72.9% of patients were less than 60 years of age. Goligher et al reported an incidence of 49%. Older patient > 60 year account for only 26.1% of patients in our study whereas it is 51% in Goligher's study.

The incidence rates of colon cancer have increased significantly in most part ofAsia.[4]

Population based data from the Bombay cancer registry reveal that there has been a significant increase in the incidence of colon cancer in both sexes in two decades. The annual increase in the colon cancer incidence from 1982 to 1995 in Mumbai is estimated to be 3.21 and 2.65 percent in men and women respectively.

Increased intake of animal fats and calories and reduced intake of fiber, fruits and vegetables are associated with an increased risk of development of large bowel cancer. Reduced intake of micronutrients such as calcium, vitamins A, C&D folic acid and selenium is also associated with an increased risk for large bowelcancer.[5,6]

AGE INCIDENCE

Carcinoma of the colon like carcinoma elsewhere is predominantly a disease of elder patients, though it may occur at any age. The youngest patients in the study were 25 years and the oldest patient was 86 years

Sex incidence

Gender distribution showed a male predominance in this study, male is to female ratio being 1.8:1. This correlates with other study.[5]

Fazeli et al., (2007),[6] reported that ca rectum presents earlier in females (Mean age is 55.1 year) than males (58.6 years). In our study, mean age of presentation in Males was 45.4 and females was 44.7 years indicating earlier presentation than western population by a decade and slightly higher incidence in males.

Location of growth with reference to sex incidence

There is difference in behavior of ca colon and rectum in regard to sex incidence. Guraya et al (2006),[8] reported an equal incidence of carcinoma colon in males and females. Guraya SY et al (2006).[8]

Site of growth

Multiple tumour of colorectum found in 98 of 3220 patients an incidence of just over 3%. In our study there was no multiple lesions. Carcinoma sigmoid accounts for nearly 1/2 of the tumour in all the studies carcinoma caecum and ascending colon account for roughly a quarter. Thereafter in order of frequencies transverse colon, splenic flexure, descending colon and hepatic flexure are involved. In our study only 9% of colon growths were from sigmoid 36.3% from ascending colon and caecum 18% each from hepatic and descending colon.

Clinical presentation

In this study of 37 patients; 28 patients (77.5%) presented as chronic symptoms, 5 patients (16.25%) presented with an acute features and 4 patients had acute on chronic symptoms.

In comparison in a study of 1644 patients in the general infirmatry at Leeds over a period of 15 years by Guraya SY et al, (2006),[8] it was found that 75.2% had been chronic patient and 14% as emergencies, with perforation, obstruction or peritonitis.

An average patient had three major symptoms, pain abdomen, rectal bleeding and change in bowel habits associated with distension and vomiting.

In our study 29 patients (78.75%) presented as pain abdomen, 14 patients (40.00%) had bleeding P/R,[9] patients (25%) had constipation and 6 patients (17.50%) patients had diarrhea.

The clinical presentation can be compared with the international study done by Abdulkareem et al., (2008).[11]

SYMPTOMS

Symptoms complex of carcinoma large bowel excluding rectum; most common presentation is pain abdomen (71.3%) followed by bleeding P/R (46.90%) then constipation (27.3%) and diarrhea and vomiting.

The result of symptoms analysis suggests that the symptoms formed two clusters; The first cluster comprised anorexia, nausea, vomiting, abdominal pain or fatigue. The second on included constipation with obstructive feature like pain abdomen, distension, vomiting. It was found that right sided lesions had more first cluster symptoms and left sided lesions had more second cluster symptoms.[9] There was no association between the duration of symptoms and severity of stage of cancer.

Colorectal carcinoma with obstruction

On the right side since the lumen is wide, contents are liquid, obstruction occurs as a late feature when compared to left side lesions. 40.4% of L. side carcinoma colon presented with obstruction in Guraya SY et al (2006),[8] study. Rectum although is the common site for carcinoma accounted for only 4.2% of cases of obstruction in Goligher's study. In our study, rectal carcinoma accounted for greater than 50% of obstruction followed by ascending colon (23%). Whereas sigmoid colon accounted for only12.5%.

DIETARY HABIT

Dietary habit is one of the independent risk factor for the etiology of carcinoma colon. Several studies had been done and it is established the fact that (1) obesity and total caloric intake (2) meat, fat & (3) fiber, vegetable and fruit have definitive relationship with carcinomacolon.[12]

Classically, a high-fiber diet was associated with a low incidence of carcinoma colon, with numerous studies substantiating this premise. A high fiber diet was believed to dilute fecal carcinogen, decreased colon transit time and generate a favorable luminal environment. Vegetable and fruits consumption is generally believed to have a protective effect against coloncancer.

In our study of 37 patients 26 patients (70%) were non- vegetarian and 11 patients (30%) were vegetarian.

PAST HISTORY

In study of 37 patients, 4 patients (10%) had history of gastrointestinal symptoms. Out of 4 patients,2 patients (5%) has history of gastrointestinal neoplasm. One patient had rectal polyp underwent polypectomy and rest of 2 had carcinoma rectum. In which two had undergone Abdominoperineal resection and one had undergone anterior resection. In rest of four patients, one had Diverticulosis, two had undergone surgery for acid peptic disease and one had diagnosed to have ileocaecaltuberculosis.

For the patient of polyp, he had undergone polypectomy 5 years back. Rest three of patients who had previous surgery for carcinoma rectum had presented with Chronic complaint, presented as metachronous lesion; among these 3; two underwent palliative surgery and one under gone definitive surgery.

Other comorbid conditions were; 17 patients had hypertension, 12 had diabetes and 3 had both hypertension and diabetes. Ischemic heart disease was presenting 4patients and bronchial asthma in 3 patients.

The common physical findings were anemia and abdominal mass. Out of 37 patients abdominal mass was palpable in 21 patients i.e.55%.

Anaemia is one of the important manifestations of carcinoma colon. Haemoglobin estimation was done in all the patients. Out of 37 patents 11 patents (27.50%) had haemoglobin less than 10gm/dl rest 58 patients had haemoglobin more than 10gm/dl.

Minimum level of haemoglobin in this study was 5.6gm %and maximum as 15.5gm/dl. Out of 22 patients who had anaemia, 8 patients (10%) had haemoglobin less than 7 gm/dl. Anaemia was noticed to have more common on right sided colonic lesion,8 patients who had severe Anaemia all had right sided lesion. And in 22 patients, 18 patients (81.80%) patients had carcinoma of right side colon. Caecum :4 patients, ascending colon 6 patients, Hepatic flexure 2 and transverse colon 6.

A study done by, Abdulkareem et al.,m 11 patients had mean level of hemoglobin was 12.2gm% and 88 (44%) had anemia. In 67 cases of right lesions 44 (65.6%) patients were anemic.

CEA LEVEL AND CLINICAL CHARACTERISTICS

In these study 66 patients was evaluated preoperatively for CEA. The range of CEA was 0.2 ng\ml to 9000 (9010) mg\mg. Among 66 patients 42 patients (63.64) had CEA level was elevated from normal level. Hence the sensitivity of CEA in detecting colon cancer in our study was 53.6% This compares with of the previous studies.

Various studies have demonstrated a significant correlation between the stage of Disease and CEA levels Beatty et al (15 patients) also demonstrated rising CEA level with each stage of disease as it advances.[12]

STAGING

In our study higher levels of CEA were found as grade of the tumour increases. Well differentiated type 55.75% of patients had elevated level while in moderately differentiated and poorly differentiated had 62.50% and 100% had elevated level of CEA.

In this liver metastasis was fond in 5 patients; all of patients had CEA level more than 4 ng/ml with minimal of 5.7 ng/l and maximum of 9010 ng/l.

USG of Abdomen

There is growing evidence of the role of ultrasonography in the carcinoma of colon. In this study in 37 patients underwent preoperatively ultrasound of abdomen and pelvis. Out of 37 patients in 26 patients (72.75%) colonic wall thickness or mass was noticed. In 5 patients liver metastasis was identified.

Colonoscopy

It is now the gold standard for the carcinoma colon. Successfully colonoscopy was done in 29 patients (80%). Synchronous lesions were present in 5 patients (14.06%). Relative incidence of colon carcinoma and synchronous lesions varies between 5-7.2% and 15-25% in various reported series by Abdulkareem et al. (2008).[11]

SYNCHRONOUS LESIONS IN COLONOSCOPY

Among the 5 patients 4 had adenomatous polyp and one had hamartomatous polyp.

In 37 patients complete colonoscopy was done in 14 patients and colonoscopic biopsy was taken in all 30 patients.

Out of 30 patients colonoscopic biopsy report; 27 patients report came as adenocarcinoma (92.18%). In rest of 3 (7.82%) patients' reports; 2 had come as tubular adenoma, 1 had hamartomatous polyp and necrotic in 1 Patient. But after the surgery all these three patients final histopathology report came as adenocarcinoma of different variety. 2 tubular adenoma came as adenocarcinoma well differentiated 1 tubular adenoma as adenocarcinoma moderately differentiated. Hamartomatous polyp had turned out as mucinous adenocarcinoma and necrotic had come as well differentiated adenocarcinoma well differentiated.[10-12]

In 1 patient previously done colonoscopy and colonoscopic biopsy report was ileocaecal tuberculosis, and patient was started on Antitubercular drug. After 6 months patient presented with acute abdominal obstruction, emergency laparotomy was done and final histopathological report of specimen came as well differentiated adenocarcinoma of ascending colon.

Treatment

Surgery is the main modality of treatment for carcinoma colon. In this study of 37 patients ,27 patients underwent surgery with curative intent (73.75%) and rest 9 had undergone surgery with palliative intent (26.25%). In 10 patients.6 patients underwent definitive surgery and 3 had colostomy and rest 3 had bypass surgery. Hence 34 patients (92.50%) had definitive surgery.

According to Guraya SY et al (2006) the resctability was 90%, out of which 18-20% was palliative. Postoperatively sigmoid colon was found as the most common site of presentation in our study. Out of 80 patients had lesion in sigmoid colon (33.75%) followed by ascending colon 14 patients (17.50) and caecum 13 patients (16.25%). This finding corresponds to the finding of other studies

Complications: Complications following surgery were mostly related to infection. This manifested most commonly as superficial wound infection and also as burst abdomen. The reasons for this are contamination of the wound, age of patients, other comorbid conditions and also technical errors.

9 patients had post-operative wound infections and 3 had burst abdomen. 3 patients had anastomotic leak and 2 patients had developed enterocutaneous fistula. Operative mortality was 2.5%, 1 patients had died one on 1St post- operative day due to MI and another one died on 6th post-operative day in MICU due to multiple organ dysfunction syndrome.

Chemotherphy

18 patients (48.71%) patients received chemotherapy in the form of 5 Fluorouracil alone, 5 Fluorouracil and Leucovorin, 5 Flurouracil Leucovrin and followed by Draliplatin or Oxaliplatin alone.[11]

Out of 18 patients, 10 patients (60.53%) completed full course of chemotherapy and rest of patients (39.48%) left the chemotherapy in between.

Follow Up

Only 65.38% patients turned up for follow up. Among 23 patients who had come for follow up, 16 patients had for regular follow up (<50% i.e.46.15%

only) and rest 6 patients had come as they developed new symptoms.

New symptoms was in form of pain abdomen (3 patients); obstructive features (2 patients); supraclavicular lymphadenopathy (1 patient); malignant pleural effusion 1.5 patients underwent re exploratory laparotomy, rest of the patients managed conservatively.

Follow up CEA was done in 21 patients among theses 14 patients (40.42%) had CEA level >4.0ng/ml. all patients where there was evidence of metastasis CEA level was more than 4 ng/ml.

CONCLUSION

The present study concluded that as per this study 60% of patients were less than 50years old which is quite high compared to the western world so the criteria for screening for colorectal carcinoma can be revised according to our area. When patients with early symptoms are subjected to screening procedures, outcome can be improved. Since most of the patients fall into 30 – 50 year category patients with the early symptoms of colorectal carcinoma should be taken up for screening procedures moreavidly. Health education to promote awareness among the patients about colorectal cancer pertaining its mode of presentation availability of screening procedures, various treatment modalities available and about the natural course of the disease can be done. Cancer prevention can be done by modifying the diet so that it contains more of fibres and less of refined carbohydrates avoidance of use. of tobacco products, avoiding consanguineous marriage and screening for relatives of patients with hereditary cancer syndromes.

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