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A CLINICAL STUDY OF COLORECTAL CANCER (CRC)

Surgery

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KEYWORDS

Colorectal Cancer (CRC), bleeding per rectum, altered bowel habit, Duke's stage, lump abdomen, intestinal obstruction.

INTRODUCTION

Colorectal cancer (CRC) is a worldwide problem, with an annual incidence of approximately 1 million cases.1 Colorectal Carcinoma is third most common malignancy after lung and Breast.2 Colorectal cancer (CRC) is one of the most common forms of gastrointestinal malignancies in the world3. Compared to the Western world, the incidence rates of colorectal cancer are low in India; and it varies from 0.7 to 3.7/100,000 among men and 0.4 to 3/100,000 among women. The vast majority of patients with CRC are above the age of 65 years[4].

Most colorectal cancers are due to lifestyle factors and increasing age, with only a small number of cases due to inherited genetic disorders.5,6 Risk factors include diet, obesity, smoking, and lack of physical activity.5,6 Dietary factors that increase the risk include red and processed meat, as well as alcohol.5 Another risk factor is inflammatory bowel disease, which includes Crohn's disease and ulcerative colitis[5].

There may be a change in bowel habit (such as unusual and unexplained constipation or diarrhea), and a feeling of incomplete defecation (rectal tenesmus). Lower gastrointestinal bleeding, including the passage of bright red blood in the, may indicate colorectal cancer.

The most common location of CRC is the left side of the colon including the rectum[7]. A tumor that is large enough to fill the entire lumen of the bowel may cause bowel obstruction. This situation is characterized by constipation, abdominal pain, and abdominal distension and vomiting.

Laboratory studies[8] like Complete blood count, liver function tests, serum carcinoembryonic antigen (CEA) and imaging studies like Abdominal/pelvic computed tomography (CT), abdominal barium study, ultrasonography of the abdomen and liver may facilitate staging. Other procedure that may be warranted includes Colonoscopy, Sigmoidoscopy, biopsy of suspicious lesions etc.

For uniformity and consistency in reporting, internationally accepted and used classification proposed by the WHO: adenocarcinoma, medullary carcinoma, colloid carcinoma, signet ring squamous cell carcinoma, epidermoid carcinoma adenosquamos carcinoma, undifferentiated and others.[9]

Staging of Tumor

Staging for colorectal cancer haven been developed primarily for prognostic purpose and for describing extent of cancer in patient's body to decide management modality.

Following staging system has been put forwarded

- Duke's classification: Based on microscopic evaluation of tumors extent.
- Astlers Coller classification: This classification system also extended Duke's staging of rectal cancer to the intra-abdominal colon and known as "modified Duke's classification."
- TNM staging system: The TNM Classification of Malignant Tumors (TNM) is a cancer staging system that describes the extent of cancer in a patient's body.

Management

- Treatment for colorectal cancer may include surgery, chemotherapy or radiation therapy, or a combination of these approaches. Surgery is the main treatment for all stages of rectal cancer, although radiation, chemotherapy, or both are often recommended in combination.

AIMS AND OBJECTIVES

- To study the clinical profile of patients with reference to localization and staging of various types of colorectal malignancy on first presentation.
- Comprehensive review of various surgical procedures adopted for radical and palliative surgical treatment.

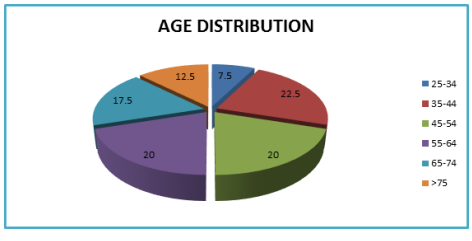
MATERIAL AND METHODS

The present study was carried out in Department of General Surgery, M.D.M. Hospital affiliated to Dr. S.N. Medical College, Jodhpur (Rajasthan). Total of 40 cases were the subject of this study admitted during October 2012 and February 2015. All patients who presented with bleeding per rectum, altered bowel habits and /or weight loss to the department were admitted in general surgical ward subjected to thorough history, clinical examination and relevant investigations to confirm the diagnosis of colorectal carcinoma. The cases of colonic, rectal and anal carcinoma were included in the present study.

After the diagnosis of colorectal carcinoma by tissue diagnosis, tumor stage was done and plan of treatment was decided in consultation with other specialties like radiotherapy and medical oncology.

OBSERVATIONS

1. AGE DISTRIBUTION



2. SEX DISTRIBUTION

In present study 62.5% patients were male and 37.5% were female. Male female ratio is 1.6:1.

3. PRESENTING SYMPTOMS IN COLORECTAL CANCER

Symptoms	No. of patients	Percentage
Constipation	38	95
Weight loss	35	87.5

Bleeding per rectum	20	50
Pain abdomen	20	50
Altered bowel habit	19	47.5

4. COLORECTAL CANCER SITE DISTRIBUTION IN PATIENTS

Site of tumor	No. of patients	Percentage
Caecum	1	2.5
Ascending colon	3	7.5
Hepatic flexure	2	5
Splenic flexure	4	10
Descending colon	2	5
Sigmoid colon	9	22.5
Rectum	17	42.5
Anal canal	2	5

5. DISTANCE OF RECTAL CANCER FROM ANAL VERGE (n=21)

Distance from Anal Verge	No. of patients	Percentage
≤1 cm	6	28.57
2-5 cm	13	61.90
>5 cm	2	9.52

6. COLORECTAL CARCINOMA STAGE (DUKE'S STAGING) ON 1st PRESENTATION

Duke staging	No. of patients	Percentage
A	5	12.5
B	8	20
C	15	37.5
D	12	30

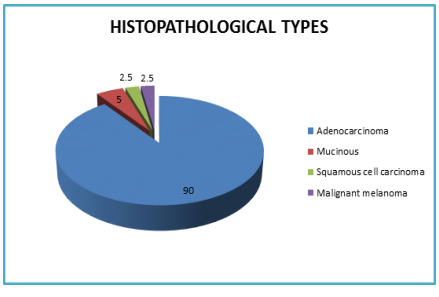
7. COLO-RECTAL CARCINOMA STAGE (TNM STAGING) ON PRESENATION

Stage	No. of patients	Percentage
Early (TNM)	13	32.5
Advance (TNM)	27	67.5

8. THE VARIOUS CURATIVE SURGICAL PROCEDURES DONE IN COLORECTAL CARCINOMA (n=18)

Curative Procedure	No. of patients	Percentage
APR (Lap assisted/Open)	7	17.50
Rt. Hemicolectomy	4	10
Lt. Hemicolectomy	7	17.50
Total	18	45

9. HISTOPATHOLOGY OF COLORECTAL CARCINOMA



10. PALLIATIVE PROCEDURE:

In this study palliative procedures were done in 55% (22) cases of colorectal carcinoma, out of which most commonly performed surgery was Transverse Colostomy done in 40% followed by sigmoid colostomy 10%, Colo-colic anastomosis and ileo-transverse by pass were done in 2.5% cases.

DISCUSSION

In present study the age of patients ranged from 25 to 85 years, majority of the patients (22.5%) presented in the age group of 35-44 years.

In present study, 62.5% were male and 37.5% were female showing overall male to female ratio of 1.6:1.

Patients presented with variety of symptoms like change in bowel habit, bleeding per rectum, pain abdomen, lump abdomen, weight loss, acute and sub acute intestinal obstruction. Constipation was main symptom (95%), followed by weight loss (87.5%), bleeding per rectum (50%), pain abdomen (50%) and altered bowel habit (47.5%).
In present study, most common clinical findings was pallor (55%) followed by palpable rectal growth on digital rectal examination (52.5%), distention of abdomen (features of intestinal obstruction) (50%), ascites (12.5%) and palpable lump abdomen and hepatomegaly (10%).

In present study, most common site of colorectal cancer is rectum (42.5%) followed by sigmoid colon (22.5%), splenic flexure of colon (10%), ascending colon (7.5%), hepatic flexure(5%), descending colon(55) & anal canal (5%) and caecum (2.5%).

In present study, most cases were in Duke's stage C (37.5%) followed by stage D (30%), stage B (20%) and stage A (12.5%) at the time of initial presentation. Similarly on TNM scale only 32.5% presented in early stage and rest (67.5%) in advance stage. Both of these tables indicate that majority of patients with colorectal carcinoma present to clinician in advance stage limiting the option available for the treatment which further affect the outcome of the disease.

In present study, curative surgical resection was done in 45% patients and palliative procedures were performed in 55%. Abdomino Perineal Resection (Laparoscopic assisted/Open) surgery was done in 17.5% and Left hemicolectomy done in 17.5% and Right hemicolectomy was done in 10% cases.

In present study most common histopathological finding is adenocarcinoma (90%) followed by mucinous (5%) and squamous cell carcinoma (2.5%), malignant melanoma of anal canal (2.5%).
In our study most commonly performed palliative surgical procedure was Transverse Colostomy done in 40% followed by sigmoid colostomy 10% cases.

CONCLUSIONS

This study revealed many important facts

- Maximum number of cases was present in the age group 35-44 years with male sex preponderance (62.5%).
- Patients with large gut malignancies predominantly had constipation as main symptom followed by weight loss, bleeding per rectum, pain abdomen and altered bowel habit.
- Most common clinical findings were pallor followed by palpable rectal growth on digital rectal examination, distention of abdomen (features of intestinal obstruction), ascites, palpable lump abdomen and hepatomegaly.
- This study shows that Rectum is most common site of tumor in large gut malignancies.
- Most colorectal cancer patients present in advance stage (Duke's stage C and TNM stage III & IV) on first presentation. Because of advance disease, curative resection could be performed in 45% cases and remaining patients were subjected to palliative procedure (55%).
- Most common histological variant was adenocarcinoma.

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