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General Surgery

A STUDY OF ACUTE EMERGENCIES IN COLORECTAL CARCINOMA IN SOUTHERN ODISHA

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ABSTRACT

Background: Colorectal carcinoma is the most common malignancy of the gastrointestinal tract. Understanding of the pathophysiology and improvement of surgical techniques have led to significant improvement in the management of colorectal cancers and reduction of associated morbidity.

Aims and objectives: To know the effects of clinicopathological and treatment modalities in the acute emergency condition due to colorectal carcinoma.

Materials and methods: Patients admitted with acute emergencies due to colorectal carcinoma to this hospital were taken up for the study.49 cases were studied from june 2015 to may 2017.Out of 49 patients 16 cases presented with acute emergencies. The data were analysed.

Results and conclusion: 16(32.6%) cases were presenting as acute emergency.9 cases were male and 7 cases were female. Most of the cases presented with featutes of obstruction and bleeding per rectum. Most of the cases present in advanced stage due to lack of awareness and effective screening programs.

KEYWORDS : colorectal cancer, bleeding per rectum, adenocarcinoma,

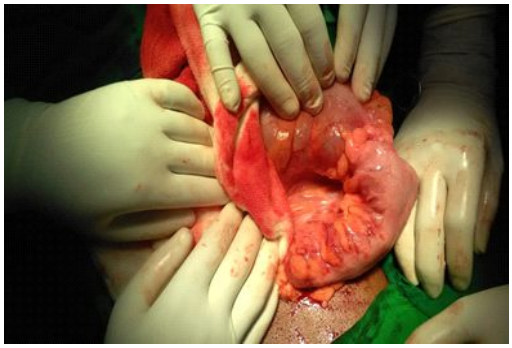
INTRODUCTION:

Colorectal cancer is a major cause of morbidity and mortality throughtout the world[1].CRC is the third most common cancer worldwide and forth most common cause of death[2,3]. There is change in pattern of Colorectal Cancer occurrence which involved more distal part, greater proportion of younger patients, especially females, with high prevalence of more advanced and aggressive tumors[4]. Screening and surveillance may help in detection of this disease on early stages especially in absence of any symptom[5]. Around 30% of the cases are recorded with non-modifiable risk factors which may increase the risk of colorectal cancer[6], it includes personal and family history or advanced adenomas, inflammatory bowel disease (IBD) and hereditary polyposis syndrome[5], Obesity, smoking, inactivity, and heavy intake of alcohol are modifiable risk factor[7]. Clinical presentation of colorectal carcinoma is influenced by size and location of tumors. Lesions of the right side tend to be bulky, ulcerating and present usually as anemia, dull aching pain in the right lower quadrant and palpable mass in the same area.Lesions of the transverse colon usually present as obstruction or pain locally. A left side lesion is usually scirrhous, annular and presents as obstruction, alteration in the bowel habits and passage of blood or mucous mixed with bowel movement[8]. Management of colorectal carcinoma depends upon the site of obstruction, state of disease and general condition of the patients. Right-side lesions are treated by resection and primary anastomosis without any diversion procedure[9].Left-side colonic lesions have been traditionally treated by a staged procedure which includes proximal decompression by stoma formation, resection and anastomosis followed by the closure of stoma. Nowadays, such staged procedure can be converted into a less staged procedure by the use of on-table colonic lavage. Re-establishment of lumen through the tumor using laser ablation or a stent placement allows decompression of bowel which can be followed by routine bowel preparation and then definitive resection. Lesions of sigmoid colon can also be managed by either Hartmann's procedure or resection with end colostomy and mucous fistula or sigmoid resection with primary anastomosis with or without stoma. Obstructing carcinomas of the rectum aremanaged by preliminary decompression colostomy followed by external beam radiotherapy and resection of tumor [8,9].

MATERIALS AND METHODS:

Patients admitted with acute emergencies due to colorectal carcinoma to the department of general surgery, M.K.C.G Medical College and Hospital, Berhampur were taken up for the study. Totally 49 patients of colorectal cancer were studied from june 2015 to may 2017.Out of 49 cases 16 cases were presented with acute emergencies. The diagnosis was ascertained by the clinical evidence of obstruction i.e., history of abdominal pain, constipation and abdominal distension and presence of obstructing stenosing, growth on digital rectal examination(DRE) if present in rectum, radiological evidence including plain x-ray of the abdomen showing gaseous distension of large bowel and/or small bowel with or without air-fluid levels; surgical finding of large bowel obstruction with dilated bowel proximal to the lesion and distally collapsed; and pathological evidence of obstructing stenosing growth. The patients were subjected to relevant investigations like complete haemogram, serum electrolyte, renal function test, USG abdomen and pelvis, ECG, plain x-ray of abdomen. plain x-ray chest, colonoscopy in selected patients. The patients were managed with nasogastric aspiration, intravenous fluid therapy, broad spectrum antibiotics, electrolyte replacement.

Depending upon the general condition of the patients, presence of systemic illness, condition of bowel, site of lesion, various surgical procedures were performed. The patients with resectable growth were subjected to either a single resection with covering colostomy or hartmann's procedure followed by subsequent appropriate surgery. In unresectable growth,only palliative procedures were done;either exploration only,colostomy only or a bypass decompression(ileo-transverse).No procedure was done in patients who were inoperable due to overall poor general condition. The patients were followed. pathological specimens were studied and staged as per duke classification and further treatment was given as per grade and stage of the tumor.



INTRAOPERATIVE PICTURE SHOWING STENOSING SIGMOID COLON GROWTH

RESULTS:

In this study there were 49 cases of colorectal carcinoma and 16 cases presented with acute emergencies were analysed.

1. AGE DISTRIBUTION

TABLE 1: AGE DISTRIBUTION

RANGE	MALE	FEMALE	TOTAL	PERCENTAGES(%)
<20	1	0	1	6.25
20-39	2	1	3	18.7
40-59	4	4	8	50
>59	2	2	4	25

Maximum incidence of acute emergencies cases was in the age group 40 – 59 year .The youngest patient was 19 year of age and oldest one was 74 years of age.

2. SEX DISTRIBUTION

TABLE 2:SEX DISTRIBUTION

NO OF PATIENTS	MALE	PERCENTAGES
MALE	09	56.2
FEMALE	07	43.7

Out of 16 emergency cases 09 were male patients and 07 were female patient

3. CLINICAL FEATURES:

TABLE 3: CLINICAL FEATURES

CLINICAL FEATURES	NO OF PATIENTS	PERCENTAGES
Abdomina pain	12	75
constipation	11	68.7
Bleeding per rectum	14	87.5
abdominal distension	16	100
Abdominal lump	2	12.5
Loss of apetite	11	68.7
Rectal mass	7	43.7

In this study all cases were (100%) presented with abdominal distension,14 cases(87.5)bleeding per rectum,12 cases(75%) abdominal pain, constipation and loss of apetite in 11 cases(68.5%)and 7 cases(43.7%) were present with rectal mass.

4.SITE OF INVOLVEMENT:

TABLE 4: SITE OF INVOLVEMENT

SITE OF INVOLVEMENT	NO OF CASES	PERCENTAGES(%)
RECTUM	8	50
SIGMOID COLON	6	37.5
CAECUM	2	12.5

In our study most common site of site of involvement was rectum(50%),followed by sigmoid colon(37.5%) and caecum(12.5%)

5. DIAGNOSIS:

TABLE 5: DIAGNOSTIC PROCEDURE

INVESTIGATION	NO OF CASES	PERCENTAGES(%)
DRE	6	37.5
proctoscopy	4	25
Plain x ray abdomen	16	100

All cases(100%) showed featutes of obstruction in plane xray abdomen,in 37.5% cases rectal growth was palpated in DRE.

6. PATHOLOGY AND STAGING

TABLE 6: STAGING

STAGE	MALE	FEMALE	TOTAL	PERCENTAGES
A	0	0	0	0
B	02	01	03	18.7
C	05	03	08	50
D	02	03	05	31.2
TOTAL	09	07	16	100

In this study 8 cases (50%) were stage C, 5 cases (31.2%) were stage D and 3cases(18.7%) were stage B. Most of cases were macroscopically annular or stenosing. All cases in this study were adenocarcinoma type.

7. TREATMET MODALITY:

TABLE 7: TREATMENT MODALITY

PROCEDURE DONE	NO OF CASES	PERCENTAGES (%)
TRANSVERSE LOOP COLOSTOMY	4	25
ILEOSTOMY	1	6.25
HARTMANN PROCEDURE	6	37.5
ILEOTRANSVERSE ANASTOMOSIS	2	12.5
SEGMENTAL RESECTION AND ANASTOMOSIS	1	6.25
TEMPORARY DEFUNCTIONING COLOSTOMY	2	12.5

16 patients presenting as emergencies were taken up.3 cases had perforation with peritonitis. 2 cases of ca caecum,3 cases sigmoid colon growth and 7 cases were carcinoma rectum. The first has presented with perforation near the proximal margin of growth treated with transverse loop colostomy. One rectal carcinoma presented with caecal perforation treated with ileostomy.13 cases presenting with bowel obstruction were taken up for emergency surgery.Out of 7 rectal growths 5 were inoperable, treated with Hartmann procedure with end colostomy. Remaining were treated with temporary defunctioning colostomy.Out of 3 growths in sigmoid colon, 2 were inoperable with extensive local infiltration, treated by transverse loop colostomy. While in one resection (palliative) done with Hartmann's procedure. two caecal growth was inoperable which was treated by ileotransverse anastamosis, one ileal growth case was treated with segmental resection and anastomosis.

8. COMPLICATION:

TABLE 8: COMPLICATION

COMPLICATION	NO OF CASES	PERCENTAGES(%)
Wound infection	3	18.7
Wound dehiscence	1	6.25
atelectasis	2	12.5
pneumonia	1	6.25
Anastomotic leak	2	12.5
Post operative ileus	6	37.5

In this study, 6 cases(37.5%) were developed post operative ileus. 18.7% cases had developed wound infection and one case was developed wound dehiscence.12.5% cases had anastomotic leak in this study.

DISCUSSION:

Outcome of patients with colorectal carcinoma is determined by a number of prognostic factors, which include stage of tumor, degree of tumor differentiation, tumor cell DNA content, lymphatic and blood vessel invasion, age of patients, number of blood transfusions given and complications of colorectal cancer like obstruction or perforation[8]. Colorectal carcinoma is one of the most common types of cancer in Western countries and is consistently ranked among the top 3 causes of cancer-related deaths. Incidence of rectal cancers is higher in Indian population[10]. Environmental factors including lifestyle modifications rampant in various countries are important but modifiable predictors of the disease (Gingras et al.[11], 2011; Jemal et al.[12], 2011). In our study, intake of fatty diet,spicy food and non vegetarian diet were the most commonly observed lifestyle factors. Colorectal Cancer is a disease affecting the individuals in the later stages of their lives. Very few patients (approximately 1% of colorectal cancer) present in the early stages of their lives (Recio and Bussey, 1965[13]; Rodriguez-Bigas et al.[14], 1996; Miller and Liechty et al[15], 1967). Gender proportion was more in favour of males irrespective of the age groups and with Male:Female ratio being 1.28:1. This correlated with the studies done by Shepherd et al[16]. As regards the site of tumors presenting with acute emergencies i.e. left versus right side, it was found that 87.5% of tumors were present in the left side and 12.5% were in right side.In studies of Wu et al.[17] and Gomez et al.[18] the distribution of carcinoma in Right and Left colon was 32% and 68% respectively. The most common symptom in our series was abdominal distension (100%) followed by bleeding per rectum (87.5%),which was similar to the study by Rascool et al. The most common form of growth in our study were ulcerated and ulceroproliferative. Most of the lesions located in the sigmoid and rectal region. Previous studies in other Asian populations also reported the same results (Fazeli et al.[19], 2007; Yantiss

et al.[20], 2009;Gupta et al.[21], 2010). In our study, the most common histological type was adenocarcinoma 16 (100%) and majority was moderately differentiated adenocarcinoma which is similar to the study done by Hosseini S V et al[22] and Stewart et al[23].most of the patients in this study presented with acute emergency were duke C and duke D staging as most of the cases present late. Treatment delivered in our hospital is in accordance with evidence-based recommendations. The use of surgery as the primary treatment modality, and indications for adjuvant chemo- and radiotherapy, are well established in the literature. The increased rate of anastomotic leakage can be explained by the unpreparedness of gut in primary resection whether the anastomosis was made with or without covering stoma. Ourfindings correlate well with that of Philips et al[24].

CONCLUSION:

There was no significant difference in location and pathologic differentiation in colorectal cancer in early onset or late onset group.The diagnosis of early onset colorectal cancer often required a high suspicion as a large number of patients reported intermittent pattern of symptom and might not have alarming symptoms. Most of the cases in the southern odisha are diagnosed late due to lack of awareness and screening facilities. Thus healthy authorities may be impressed upon to design a comprehensive screening program to effectively counter colorectal cancer prospective so that acute emergency presentation of colorectal cancer may be minimised with a view to achieve a lower morbidity and mortality rate.

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