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Surgical Management of Carcinoma of Caecum

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SUMMARY

Forty patients 30 male and 10 female comprise this study which was conducted at Nishtar Hospital, Multan from January, 1998 to June 1999 (Eighteen months). Twelve patients (over 30%) presented as emergency; four with suspicion of acute appendicitis and eight patients with intestinal obstruction. Most of the patients were in their 6th or 7th decade of life with age range 30-80 years.

70% of the patients presented with a mass in the right iliac fossa and only a few patients 20% were having clinical features of intestinal obstruction. Barium study remained the primary diagnostic tool. Right hemicolectomy with primary ileo-colic anastomosis was our standard surgical procedure and was performed in 70% of the patients. However in some cases ileotransverse bypass operation was done as the tumour was locally advanced. In 1/3rd of the patients the disease was so advanced that any resection, curative / palliative, was not possible. This study high lights the late presentation of caecal carcinoma and the importance of early diagnosis.

INTRODUCTION

Colorectal cancer is the second leading cause of cancer deaths in Western countries[1]. No age group seems completely immune to the risk of colorectal cancer but it occurs more commonly over the age of 60 years (50% of patients) and maximally in the seventh decade (60-69 years); about 5% of patients are under 30 years old[2], may be reflecting familial cancer tendency or earlier occurrence of cancer in patients with familial colonic polyposis.

Carcinoma caecum / ascending colon accounts for upto 14% of colorectal tumours as reported from the developed countries[3]. There are but few reports from the subcontinent on the presentation and management of caecal carcinoma.

This study was designed to review data pertaining to caecal carcinoma such as age, sex, clinical presentation, diagnosis and treatment of patients admitted to the department of surgery in a major teaching hospital in Southern Punjab over a period of 18 months.

PATIENTS AND METHODS

All patients admitted from January 1998 through June, 1999 with the provisional diagnosis of carcinoma of caecum managed in the Surgical Department of Nishtar Hospital, Multan were included in this study. The final diagnosis was based on Histopathology following exploration.

Data regarding the history, clinical signs, investigations, surgical treatment and the outcome of these patients was collected. All operations were performed by Consultants / Senior Registrar and primary resection was preferred over ileostomy or bypass. In emergency situation, exteriorization of the bowel ends were carried out for safety, and ileocolic bypass was done where any type of resection was not possible.

RESULTS

During the period of study a total number of forty cases of carcinoma of caecum were collected for review. There were 30 males and 10 females with a male to female ratio of 3:1. The age range was 30 to 80 years with maximum number of patients having age between 61-70 years (Table 1). The mean age was 65 years. Most of the patients (over 75%) came from rural area of Southern Punjab belonging to lower socioeconomic status.

Amongst these 40 patients, 28 cases (70%) had clinical impression of an appendicular mass, 4 cases had signs and symptoms suggestive of acute appendicitis whereas 8 patients presented with intestinal obstruction (Table 2).

Table 1: Age and sex incidence (n=40)

Range (Years)	*Male*	*Female*	*Total*
21-30	02	0	02
31-40	0	0	0
41-50	04	04	08
51-60	06	02	08
61-70	16	04	20
71-80	02	0	02

Table 2: Mode of presentation (n=40)

Clinical Presentation	*Number*	*Percent*
Mass RIF	28	70
Acute appendicitis	04	10
Intestinal obstruction	08	20
Total	**40**	**100**

Abdominal mass was the predominant finding. Pain was the presenting symptom in 30 patients (75%). It was generalized in 20 patients (50%) while localized in 10 patients (25%). Twenty patients (50%) had vomiting, eighteen (46%) were constipated. Twenty eight patients (70%) were found to have significant weight loss, at the time of presentation, four patients (10%) were having fever.

Investigations revealed 10 patients (25%) having a haemoglobin less than 10 gm/dl. Stool for occult blood was carried out in 24 cases (60%) and was positive in eighteen (75%). Chest radiograph revealed 4 patients (10%) having Pulmonary Kochs. Plain X-ray abdomen in supine and erect posture was carried out in all patients. It was suggestive of intestinal obstruction in 8 (20%). Barium enema was performed in 20 (50%) patients and showed evidence of tumour in all cases. Colonoscopy was performed in two (5%) patients and revealed the tumour in both.

The surgical procedures in this study have been tabulated in Table 3. Right hemicolectomy with primary ileocolic anastomosis was done in 28 (70%) patients. In 4 patients (10%) who presented as intestinal obstruction in emergency, right hemicolectomy with exteriorization of the bowel ends were carried out. In other 4 (10%) patients ileotransverse bypass was undertaken since the tumour was found to be advanced and fixed. In remaining 4 (10%) patients tumour was wide spread involving the peritoneal cavity and liver rendering any surgical procedure impossible. An open biopsy was the only procedure carried out and these 4 patients expired within 10 days of exploration, the hospital mortality being 10%. Four patients developed faecal fistula and all of these managed conservatively without any further deaths. Two patients (5%) had burst abdomen for which secondary suturing was done. Overall hospital morbidity and mortality has been recorded in Table 4.

Table 3: Operative procedures (n=40)

Procedure	*Number*	*Percent*
Rt.hemicolectomy + Primary Ileostransverse anastomosis	28	70
Rt.hemicolectomy + Exteriorization of bowel ends	04	10
Ileotransverse bypass without resection	04	10
Omental biopsy only	04	10
Total	40	100

Table 4: Morbidity and mortality (n=40)

Complication	*Number*	*Percent*
Burst abdomen	02	05
Faecal fistula	04	10
Septicemia	02	05
Jaundice	04	10
Death (Mortality)	04	10

DISCUSSION

The etiological factors regarding carcinoma of caecum are similar to those of rest of the colon. Left sided tumours are for more common than the tumours of the right colon.

Since 80's there has been a shift to the right in the distribution of colonic cancer with significant increase in the incidence of right sided tumours4. Reasons for this change in distribution are not fully clear. It may be because of increased detection and removal of rectosigmoid polyps due to increased frequency of colonoscopy which may have dramatically reduced left sided lesions. However, it would have equally decreased the incidence of right sided lesions. Another theory is age dependent shift to right of colorectal lesions. Therefore an aging population may be more prone to the development of right sided carcinoma. Other theories like changing dietary habits (High fat low fibre) and patients who had previous cholecystectomy have also been highlighted but not confirmed by studies5.

The incidence and presentation of caecal carcinoma from Pakistan is infrequently reported. The present study showed comparable results with studies from Pakistan as well as International studies with some distinctive features..

Although young are not immune to caecal cancer, the youngest patient in our study was 30 years male. As reported by Khawaja et al from Lahore (Central Punjab), of 45 patients with colorectal cancer the mean age was 45 years, and the youngest patient 17 years old[6]. In the present study of 40 patients, 70% (28 patients) presented with an abdominal mass as compared to 13% reported by Gennoer et al[7]. In another study by M Zaki a palpable mass was detected in 45% of patients in a series of 118 patients indicating it as most frequent mode of presentation[8]. Caecal tumours rarely produce obstructive symptoms due to wider lumen and liquid contents; however 8 (20%) patients presented with intestinal obstruction. This is indicative of the advanced stage of the tumour at the time of presentation.

Seventy percent of the patients in the present study presented with significant weight loss and 25% had marked anemia indicating late presentation of patients as compared to the Western experience. The present study also shows that caecal carcinoma is more prevalent in the lower socioeconomic group, this may explain the late presentation of these patients with abdominal mass or bowel obstruction.

In the present study Contrast Radiology (Barium studies) was most helpful in diagnosing 20/20, patients with sensitivity and specificity of 100%. Gennero et al reported positive results in 50 out of 54 patients while M. Zaki et al reported abnormal barium studies in 74 out of 92 cases of carcinoma caecum8. Double contrast enemas may be more helpful in detecting early lesions.

In the developed countries endoscopic screening and surveillance is recommended in all persons with the following risk factors[9]

1. Previous treatment of colorectal adenomatous polyps or cancers.
2. Ulcerative colitis
3. Patients with hereditary colorectal syndromes.
4. Ist degree relative of patients with colorectal cancer.

As endoscopic facilities are not available to majority of our patients, Contrast radiology remains the mainstay of diagnosis in the developing countries.

Whereas Ba-enema and colonoscopy are the gold standard for the diagnosis of colonic tumours, both require bowel preparation, and are sometimes intolerable for the patients. Abdominal ultrasound has recently been added to the diagnostic modalities with high sensitivity and moderate specify in experienced hands[10].

Since the only cure / palliation for carcinoma of the colon is enbloc resection, this remains the procedure of choice. In our experience; curative resection was possible in 70% patients (28/40), whereas palliative resection was possible in another 10% patients (4/40). Due to locally advanced tumour 4 patients (10%) underwent palliative ileotransverse bypass. In 10% of the patients, only omental biopsy was possible due to wide spread metastasis in the liver and peritoneal cavity.

The hospital mortality was 10%. All four patients with advanced disease died within 10 days of surgery. Gennero et al. has reported 12 perioperative deaths out of 66 cases (19% mortality)[7]. This is comparable to our mortality of 10%. Histopathology showed 20 cases (50%) in Dukes B, 12 (30%) in Dukes C and 8 (20%) in Dukes D. No case was reported as Dukes stage A. Hence 50% of our patients were in the advanced

stage (Duke C & D) at the time of presentation. Follow up was not possible in a number of patients as about 50% of the patients stopped reporting to us from 3-6 months post operatively.

The management of colonic carcinoma requires a combined approach and surgery remains the mainstay of treatment of carcinoma of caecum. Thus right hemicolectomy with primary ileocolic anastomosis is a safe procedure in patients with good / fair performance status. Even in emergency situation where curative surgery is not possible, palliation is best achieved by primary resection and exteriorization of bowel ends which was carried out in 10% of the cases. Operative mortality can be reduced by proper selection of patients for various surgical procedures and it can even further be improved if patients are operated upon by experienced surgeon.

It may therefore be concluded from our experience that caecal carcinoma is not uncommon and presents rather late, as no patient was seen in Dukes stage A, 70% patients presenting with abdominal mass, and 20% of patients couldn't have any type of resection. Curative resection was only possible in about 70% of our patients. This signifies advanced stage at presentation mainly due to lack of awareness, poor health care facilities and above all illiteracy. We recommend that patients with positive haemoccult test and a suggestive history be investigated by double contrast barium enema at the least and flexible colonoscopy where possible. In the developed countries mass education, availability of stool testing for occult blood with access to air contrast enema and colonoscopy has led to early detection of cases with consequent curative resection resulting in improved survival. This study also supports the contention that colonoscopy or other investigations employed must examine the entire colon. Although survival data is not available, the out come of resectional surgery in our experience is encouraging. There is also a need for a tumour registry and collaboration between various teaching hospitals where these patients are managed.

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