



CARCINOMA OF CAECUM; FREQUENCY AND MANAGEMENT STRATEGIES AMONG PATHOLOGIES IN RIGHT ILIAC FOSSA EXCLUDING GYNAECOLOGICAL DISORDERS

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INTRODUCTION

The cancer of caecum and ascending colon occupies 14% of colorectal cancers in the developed countries, the clinical presentation for CA colon varies according to the type and grade of growth, proliferative, ulcerative or annular and its location either in the proximal or distal segments of colon.^{1,2} The usual presentation of the patients are abdominal pain, change in bowel habits, bleeding from rectum, loss of appetite and weight loss, palpable lump, nausea / vomiting, pallor, partial or complete bowl obstruction, melaena, perforation with abscess formation or peritonitis.³ The most observed feature is alteration in bowel habit, followed by abdominal discomfort

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ABSTRACT... Objectives: To determine the frequency, clinical presentation and management strategies for carcinoma of caecum among pathologies in right iliac fossa excluding gynaecological disorders at Liaquat university hospital Hyderabad / Jamshoro. **Study Design:** Cross sectional multi-disciplinary study. **Period:** Thirty months. **Setting:** Liaquat University Hospital Hyderabad / Jamshoro. **Patients and Methods:** All the patients presented with GI symptoms, intestinal obstruction, and appendicitis or had mass in the right iliac fossa were selected and recruited and further evaluated for existence of carcinoma of caecum and preceded for management strategies. The data was analyzed in SPSS 16 and the frequency and percentage was calculated and the level of significance was $p\text{-value} \leq 0.05$. **Results:** Total 50 patients were diagnosed as caecum cancer during thirty months study period. The cancer of caecum was common in older age group. The mean age \pm SD for whole population and male as well as female gender was 67.53 ± 6.98 , 66.32 ± 8.75 and 65.34 ± 5.96 and of fifty cases, thirty two (64%) were males and eighteen (36%) were females respectively. The common presentation identified was mass in right iliac fossa in 28 patients ($p=0.03$) while the common operative procedure performed was ileotransverse anastomosis with right hemicolectomy in 34 patients which is non-significant in relation to age ($p=0.7$) whereas it was significant in context to gender ($p=0.04$) respectively. **Conclusion:** The common presentations for carcinoma of caecum detected was right iliac fossa mass while the predominant age, gender and operative procedure performed were seventy plus years, male gender population and lleotransverse anastomosis with right hemicolectomy.

Key words: Carcinoma of caecum, Colon cancer / carcinoma, right iliac fossa mass, lleotransverse anastomosis with right hemicolectomy, acute appendicitis and intestinal obstruction.

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as pain and tenderness over the caecum / right iliac fossa.⁴ On inquiry in about 10% of cases of carcinoma caecum, grossly blood is detected in stools.⁵ During clinical examination palpable lump is felt in the right iliac fossa and might be the initial indication of the disorder and in around 75% of the cases of CA caecum and ascending colon a lump can be identified on clinical examination.^{6,7} In specific investigation occult blood in the stool is a good diagnostic tool while barium studies shown a constant irregular, small filling defect.^{8,9} Early negative radiography is non conclusive for growth absence, in 75 cases of colon CA examined radiologically no pathology was detected in 8% of subjects while the tumours

of the caecum are more likely to be detected by barium meal rather than enema and in big mass the soft tissue shadow may be observed as the tumour.^{10,11} The fiber optic colonoscopy has a diagnostic and therapeutic approach and is intermediate parameter between barium studies and laparotomy. Majority of colonic disorders arise from the mucosal aspect of the gut and can be more visualized by sighting and getting biopsies specimen through endoscope.¹² Colonoscopy is the tool for persistent bleeding and negative radiology while liver scan and chest radiograph are for metastasis while the treatment options are chemotherapy and surgery.¹³ Therefore, this study was planned and conducted to observe the frequency and management strategies for carcinoma of caecum among pathologies in right iliac fossa.

PATIENTS AND METHODS

This cross sectional study of thirty months was conducted in the department of surgery at Liaquat university Hospital Jamshoro. The patients presented with GI symptoms, intestinal obstruction, and appendicitis or had mass in the right iliac fossa were selected and recruited. The detail history and relevant clinical examination was performed and along with routine investigations the specific investigations included were barium studies, occult blood, CT / MRI scans, tumor markers, ultrasound and biopsy were also advised to diagnose the specific pathological disorder and its pattern. The gynecologist opinion was taken to exclude the gynecological pathologies related to uterus and its appendages and ovaries while the physician opinion was also taken to exclude the ileocecal tuberculosis and its extra- intestinal manifestations whereas the subjects with masses arising from anterior abdominal wall, bone, recent myocardial infarction and head injury and pregnant ladies, multiple secondaries and recurrent malignancy were placed in exclusion criteria. The informed consent was taken from every relevant patient while the proforma was designed to collect the data for the study. All the maneuvers were performed under medical ethics and the cooperation of whole research team. The software SPSS version 16 was used to save

and manipulate the data through frequencies, percentages, means \pm SD and statistical significance obtained by chi-square test as p-value \leq 0.05.

RESULTS

Total 50 patients were diagnosed as caecum cancer in thirty months study period. The cancer of caecum was common in older age group; eight (16%) had GI symptoms and almost all cases have had weight loss with fixed swelling and contrast radiographic barium studies shown irregular filling defect with positive shouldering sign. The mean age \pm SD for whole population and male as well as female gender were 67.53 ± 6.98 , 66.32 ± 8.75 and 65.34 ± 5.96 respectively. All the patients were managed accordingly whereas regarding the surgery the right hemicolectomy with ileotransverse anastomosis was the procedure of choice and right hemicolectomy with bowel ends exteriorization considered in emergency situation. The results of the study are presented in Table I-V.

DISCUSSION

In present study 80% cases were observed in the age group above 50 years with mean age \pm SD 69.76 ± 8.732 for overall population while as far as gender is concerned 32 (64%) were males and 18 (36%) were females respectively. According to Weitz J, et al in the study of 1553 subjects diagnosed as colon CA for a period of thirty years presented at Mater Misericordiae Hospital Dublin, 39% individuals were aged over 70 years and 51% were between 50-69 years.¹⁴ Seventy percent carcinomas were left sided colon, 22% tumors were right sided while caecum CA accounted for 18%. Furthermore it was mentioned that caecum CA was more common in subjects with 60 plus year age patients with elderly male subject predominance.¹⁴

In present study 30% out of 50 patients presented with mass and dull aching pain while the average duration of symptoms was from more than three months, 16% of cases had vomiting and almost all cases had weight loss with fixed swelling.

		Gender		Total	P-value
		Male	Female		
AGE (yrs)	30-39	3	1	4	0.05*
		9.4%	5.6%	8.0%	
	40-49	5	1	6	
		15.6%	5.6%	12.0%	
	50-59	2	6	8	
		6.2%	33.3%	16.0%	
60-69	7	1	8		
	21.9%	5.6%	16.0%		
70+	15	9	24		
	46.9%	50.0%	48.0%		
Total		32	18	50	
		100.0%	100.0%	100.0%	

Table-I. The distribution of age and gender

*Statistically significant

		Clinical Presentation			Total	P-value
		Acute appendicitis	Intestinal obstruction	Right iliac fossa mass		
AGE (yrs)	30-39	0	2	2	4	0.03*
		.0%	14.3%	7.1%	8.0%	
	40-49	1	0	5	6	
		12.5%	.0%	17.9%	12.0%	
	50-59	2	6	0	8	
		25.0%	42.9%	.0%	16.0%	
60-69	1	2	5	8		
	12.5%	14.3%	17.9%	16.0%		
70+	4	4	16	24		
	50.0%	28.6%	57.1%	48.0%		
Total		8	14	28	50	
		100.0%	100.0%	100.0%	100.0%	

Table-II. The distribution of age and clinical presentation

*Statistically significant

		Operative Procedure			Total	P-value
		Non resected ileotransverse bypass	Bowel ends exteriorization with right hemicolectomy	Ileotransverse anastomosis with right hemicolectomy		
AGE (yrs)	30-39	0	1	3	4	0.7*
		.0%	9.1%	8.8%	8.0%	
	40-49	0	1	5	6	
		.0%	9.1%	14.7%	12.0%	
	50-59	1	2	5	8	
		20.0%	18.2%	14.7%	16.0%	
60-69	1	2	5	8		
	20.0%	18.2%	14.7%	16.0%		
70+	3	5	16	24		
	60.0%	45.5%	47.1%	48.0%		
Total		5	11	34	50	
		100.0%	100.0%	100.0%	100.0%	

Table-III. The distribution of age and operative procedures

*Statistically non-significant

		Gender		Total	P-value
		Male	Female		
Clinical Presentations	Acute appendicitis	5	3	8	0.9*
		15.6%	16.7%	16.0%	
	Intestinal obstruction	8	6	14	
		25.0%	33.3%	28.0%	
	Right iliac fossa mass	19	9	28	
		59.4%	50.0%	56.0%	
Total		32	18	50	
		100.0%	100.0%	100.0%	

Table-IV. The Distribution of Gender and Clinical Presentations

*Statistically non-significant

		Gender		Total	P-value
		Male	Female		
Operative Procedure	Non resected Ileotransverse bypass	3	2	5	0.04*
		9.4%	11.1%	10.0%	
	Bowel ends exteriorization with right hemicolectomy	4	7	11	
		12.5%	38.9%	22.0%	
	Ileotransverse anastomosis with right hemicolectomy	25	9	34	
		78.1%	50.0%	68.0%	
Total		32	18	50	
		100.0%	100.0%	100.0%	

Table-v. The distribution of gender and operative procedure

*Statistically significant

In the study by Weitz J, et al there were no any lump in the caecum, colon and hepatic flexure, neither GI symptoms observed and in such circumstances the only presentation will be deterioration of general health / nonspecific symptoms including weight loss, weakness, fatigue, malaise and anaemia.¹⁵

The study by Terzic J, et al observed that majority of cases with caecum CA had constant abdominal pain in the right iliac fossa or subcostal or epigastrium with local tenderness and guarding / rigidity while the abdominal lump was observed in few cases usually in the right iliac fossa.¹⁶ In present study, all the subjects presented with right iliac fossa mass and had dull aching abdominal pain. The consistency of mass was, fixed, hard, and tender to palpate and dull on percussion.

The study by Dobos N, et al observed that barium enema revealed a filling defect with irregular margins¹⁷, while in present study, barium studies was done in all subjects and revealed persistent small irregular filling defect within caecum. The

study by Kayaalp C, et al¹⁸ observed that the sensitivity, specificity and accuracy for imaging (ultrasound) of abdomen in detecting colon tumors was 95%, 66% and 96% respectively while in present series, 78% of masses were detected on ultrasound.

The study by Ramacciato G, et al performed extensive right hemicolectomy except when the patient general status not stable and allows restriction of the resection to the minimum with reasonable chance to cure.¹⁹ In present study the structures removed in right hemicolectomy are last 30 centimeters of ileum, ascending colon, caecum, and junction of the right one third and left two third of sigmoid colon, appendix, peritoneum with vessels and lymph nodes while care was taken for any injury to the duodenum, right ureter, ovarian / spermatic vessels while post operatively the plan was made regarding chemotherapy by taking the opinion and in coalition with oncologists.

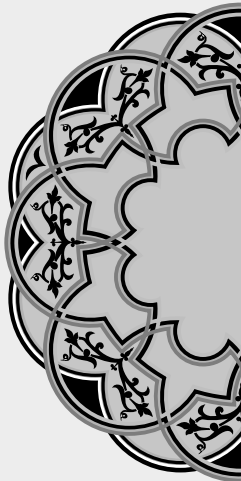
CONCLUSION

The presentations observed for carcinoma of caecum was lump in right iliac fossa mass while the predominant age, gender and operative procedure performed were seventy plus years (48%), male gender population (64%) and ileotransverse anastomosis with right hemicolectomy (68%).

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*“Life is like riding a bicycle.
To keep your balance,
you must keep moving.”*

Albert Einstein

AUTHORSHIP AND CONTRIBUTION DECLARATION

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2	Dr. Abdul Ghafoor Dalwani	Drafting the article and shares its expert research opinion and experience in finalizing the manuscript.	
3	Dr. Zubair Ahmed Yousfani	Contributed in conception and interpretation of data and give his expert view for manuscript designing.	
4	Dr. M. Siddique Khurram	Analysis and interpretation of data contributed in conception and shares its expert research opinion.	
5	Dr. Roohi Bano	Drafting interpreting and analyzing the data.	
6	Dr. Jamrose Durrani	Drafting interpreting and analyzing the data	
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