ORIGINAL RESEARCH

Adenocarcinoma in right hepatic flexure- A tertiary Care Centre

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ABSTRACT

Background: With 8.9% of all malignancies in both males and females, colorectal cancers rank third globally in terms of frequency and are the third largest cause of cancer-related mortality. The present study was conducted to assess adenocarcinoma in right hepatic flexure. **Materials & Methods:** 64 cases of adenocarcinoma in right hepatic flexureof both genders were enrolled. Both open and laparoscopic techniques were used. Parameters such as ASA score, TNM AJCC stage, number of lymph nodes harvested, length of hospital stay(LOS) in days, etc. were recorded. **Results:** Out of 64 patients, males were 40 and females were 24.ASA scoreI was seen in 4, II in 10, IIIin 32, and IV in 18 patients. TNM AJCC stageI was seen in 8, II in 34, and III in 22 patients. Method used was open in 26, and laparoscopic in 38. The number of lymph nodes harvestedwas <12lymph nodes in 41, and >12 lymph nodes in 23 patients. The length of hospital stay (LOS) in days in open method was 11.2 and in laparoscopic method was 5.4. R0 resection was done in 60 patients. The difference was significant (P< 0.05).Readmission within 30 days was seen in 7 (10.9%) and 30-day mortality was seen in 5 (7.8%). **Conclusion:** Maximum cases of adenocarcinoma of hepatic colon was seen among males. Readmission and mortality rate found to be high among patients.

Keywords: adenocarcinoma, right hepatic flexure, resection

INTRODUCTION

With 8.9% of all malignancies in both males and females, colorectal cancers rank third globally in terms of frequency and are the third largest cause of cancer-related mortality.[1] The occurrence of varies greatly, with North America, Australia, and Europe having the highest incidence rates. Lower rates are found in developing nations, especially in Asia and Africa.[2]The yearly incidence rates (AARS) for rectal and colon cancer in men in India are 4.1 and 4.4 per 100,000, respectively. According to the 2013 ICMR study, Thiruvananthapuram had the highest AAR (4.1) for CRCs in men, followed by Bangalore (3.9) and Mumbai (3.7) per 100000.[3]The right hepatic flexure, also known as the right colic flexure or the hepatic angle, is a sharp bend in the large intestine where the ascending colon meets the transverse colon. It is located in the upper-right quadrant of the abdomen, typically near the liver.[4] This flexure is significant in the digestive process as it marks the transition of fecal material from the ascending colon to the transverse colon, where further absorption of water and nutrients occurs before waste material moves into the descending colon.[5]

Adenocarcinoma of the right hepatic flexure refers to a type of cancer that originates in the cells lining the right side of the colon at the point where it bends near the liver.[6] Adenocarcinoma is the most common type of colon cancer, accounting for about 95% of cases. It arises from the glandular cells that line the inner surface of the colon and rectum.[7]The present study was conducted to assess adenocarcinoma in right hepatic flexure.

MATERIALS & METHODS

The present study consisted of 64 cases of adenocarcinoma in right hepatic flexureof both genders. All gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. Both open and laparoscopic techniques were used. Parameters such as ASA score, TNM AJCC stage, number of lymph nodes harvested, length of hospital stay(LOS) in days, etc. were recorded. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 64		
Gender	**Male**	**Female**
Number	40	24

Table I shows that out of 64 patients, males were 40 and females were 24.

Table II Assessment of parameters

Parameters	Variables	Number	P value
ASA score	I	4	0.03
	II	10	
	III	32	
	IV	18	
TNM AJCC stage	I	8	0.05
	II	34	
	III	22	
Method	Open	26	0.71
	Laparoscopic	38	
number of lymph nodes harvested	<12 lymph nodes	41	0.02
	>12 lymph nodes	23	
length of hospital stay(LOS) in days	Open	11.2	0.01
	Laparoscopic	5.4	
R0 resection	Yes	60	0.01
	No	4	

Table II, graph I shows that ASA scoreI was seen in 4, II in 10, III in32, and IV in 18 patients. TNM AJCC stageI was seen in 8, II in 34, and III in 22 patients. Method used was open in 26, and laparoscopic in 38. The number of lymph nodes harvestedwas<12lymph nodes in 41, and >12 lymph nodes in 23 patients. The length of hospital stay (LOS) in days in open method was 11.2 and in laparoscopic method was 5.4. R0 resection was done in 60 patients. The difference was significant (P< 0.05).

Graph I Assessment of parameters

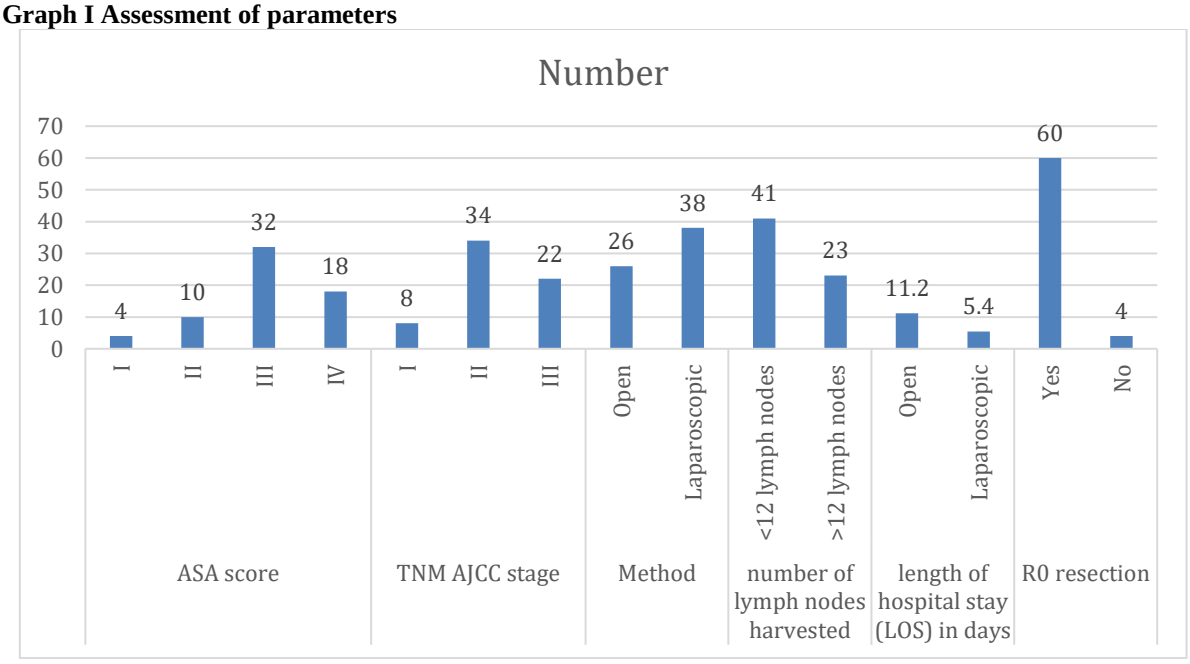

Table III Readmission and mortality

Parameters	Number	Percentage
Readmission within 30 days	7	10.9
30-day mortality	5	7.8

Table III shows that readmission within 30 days was seen in 7 (10.9%) and 30-day mortality was seen in 5 (7.8%).

DISCUSSION

Symptoms of adenocarcinoma of the right hepatic flexure may include abdominal pain or discomfort, especially in the upper-right quadrant, changes in bowel habits, such as diarrhea, constipation, or changes in stool consistency, rectal bleeding or blood in the stool, unexplained weight loss, fatigue and weakness and anemia due to chronic blood loss.Early detection and treatment are crucial for better outcomes in colon cancer.[8] Screening tests such as colonoscopy can help detect adenocarcinoma of the colon in its early stages when it's more treatable. Treatment options for colon cancer may include surgery, chemotherapy, radiation therapy, targeted therapy, and immunotherapy, depending on the stage and characteristics of the cancer.[9] The present study was conducted to assess adenocarcinoma in right hepatic flexure.

We found that out of 64 patients, males were 40 and females were 24. Patil et al[10]studied total of 409 colorectal carcinomas (CRC). Four hundred and nine patients were diagnosed to have CRC. Majority were males (54.77%), rectum was commonest site (57.7%). Most of them were adenocarcinoma (54.52%) followed by mucin-secreting adenocarcinomas (22.49%) and squamous cell carcinoma in 9.29%. Most of them presented at IIB stage (40.09%). Patients less than 40 years (30.81%) showed less favourable histology and higher grade of tumor.

We found that that ASA scoreI was seen in 4, II in 10, III in 32, and IV in 18 patients. TNM AJCC stageI was seen in 8, II in 34, and III in 22 patients. Method used was open in 26, and laparoscopic in 38. The number of lymph nodes harvested was <12lymph nodes in 41, and >12 lymph nodes in 23 patients. The length of hospital stay (LOS) in days in open method was 11.2 and in laparoscopic method was 5.4. R0 resection was done in 60 patients. Odermatt et al[11]compared the outcomes of colonic splenic flexure tumours treated by extended right colectomy versus left colectomy.A total of 30 (44 %) splenic flexure tumours were resected by left colectomy and 38 (56 %) by right colectomy. Emergency operations were more common (74 versus 20 %, $p < 0.001$) in the right colectomy group. In the univariate analysis, the 5-year overall survival (55 % for right colectomy versus 60 % for left colectomy, $p = 0.197$) and 5-year recurrence-free survival (41 versus 54 %, $p = 0.180$, respectively) showed a trend towards a non-significant survival benefit for left colectomy. However, when adjusted for age, gender, ASA classification, tumour stage, urgency and year of surgery, this trend disappeared.

We found that readmission within 30 days was seen in 7 (10.9%) and 30-day mortality was seen in 5 (7.8%). Chong et al[12] compared the results of EC with TC. The tumour location ranged from the hepatic to splenic flexure. In total, 939 (88%) patients underwent EC (extended right hemicolectomy in 750 patients and left hemicolectomy in 189 patients), while TC was performed in 127 (12%) patients. Patients who had extended right hemicolectomy underwent ligation of ileocolic, right colic, and middle colic vessel ligation at their origin, while during left hemicolectomy the left colic pedicle and either the left branch of the middle colic or the origin of the middle colic pedicle were ligated. During transverse colectomy the middle colic pedicle was ligated at its origin. A minimum of 5 cm was adopted for colonic resection margin. After propensity score matching there were 127 patients in each group. The T3/T4 patients constituted 63% in both the arms. The median specimen length was 34 cm for the EC group and 19 cm for the TC group, while the median number of total nodes retrieved was 23 and 16, respectively. At a median follow-up of 59.6 (0.5-242) months, the 5-year DFS (85% vs 89.8%, $P = .128$) and 5-year OS (86.6% vs. 84.3%, $P = .282$) was not different between the two groups. The finding that the length of the resected bowel and number of nodes did not influence the survival has also been one of the conclusions of the COST study. Central vascular ligation was performed routinely and the study reported a local recurrence rate of 1.4% and 0.8%, respectively. In this extended study, 13% patients were lost to follow-up.

The limitation of the study is the small sample size.

CONCLUSION

Authors found that maximum cases of adenocarcinoma of hepatic colon was seen among males. Readmission and mortality rate found to be high among patients.

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