ORIGINAL ARTICLE

EMERGENCY SUBTOTAL COLECTOMY AND PRIMARY ILEO-COLIC ANASTOMOSIS IN THE MANAGEMENT OF OBSTRUCTING CARCINOMA OF LEFT COLON

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ABSTRACT

Background: Carcinoma of left colon is a common cause of large bowel obstruction in elderly and middle aged population. This study was conducted to evaluate one stage operation i.e. emergency subtotal colectomy and primary ileo-colic or ileo-rectal anastomosis in the management of these patients.

Methodology: This prospective study was conducted from January 2004 to December 2008 at DHQ Teaching Hospital D.I.Khan on patients with obstructing carcinomas of left colon. All patients underwent one-stage procedure. Postoperative diarrhea was controlled with medication. Patients were referred to oncologist for adjuvant chemotherapy and followed at outpatient department.

Results: During the study period, 28 patients, 18 males and 10 females, age range 23-69 years, with obstructing carcinoma of left colon were operated. Mean operative time was 112+31 minutes. Extent of subtotal colectomy and site of anastomosis were determined by the site of tumor. Ileo-descending colon anastomosis was performed in 2(7.15%), ileo-sigmoid 14(50%), and ileo-rectal in 12(42.8%) patients. Average hospital stay was 8 days. Postoperatively 3(10.7%) patients developed minor complications (wound infection and atelectasis) while 1(3.6%) developed anastomotic leak treated by re-operation. There was no perioperative mortality. All patients enjoyed normal diet and were stable with 1-3 bowel movements per day. During follow-up 3(10.7%) patients died of metastatic disease and 2(7.15%) of unrelated problems. Remaining 23 patients were alive and free of disease.

Conclusion: Subtotal colectomy and ileocolic anastomosis (one stage procedure) should be considered as the treatment of choice for patients with obstructing carcinoma of left colon.

KEYWORDS: Large bowel obstruction, Colonic carcinoma, Subtotal colectomy, Iliocolic anastomosis.

INTRODUCTION

Colorectal cancers are relatively common malignancies of old and middle aged groups and 10-30% of these patients present as an emergency with acute or subacute large bowel obstruction.[1,2] Obstructing colonic carcinomas have overall grave prognosis because these patients usually present at an advanced stage.[3] Emergency surgery for colorectal cancer is widely thought to be associated with high morbidity and mortality.[4] Management of this potentially fatal condition continues to be controversial and a change in surgical approach might change prognosis for these patients.[5]

Obstructing lesions of the right colon are usually offered resection and primary anastomosis but many surgeons are reluctant to offer this approach in obstructing lesions of left colon.[6] Different surgical approaches are described for obstructing lesions of left colon. Classical approach of immediate diverting colostomy followed by definitive resection and colostomy closure (3 stage approach) is now changing towards more aggressive one stage emergency subtotal colectomy and primary anastomosis.[7-9]

Other options include a Hartman's type of resection, resection followed by intra-operative colonic lavage and primary anastomosis,[10] a Mikulicz type of resection and later colostomy closure.[11] The use of rectosigmoid stents as an alternative to initial surgical decompression is still at an experimental stage.[12]

Many studies suggest that one stage operation is more advantageous than staged procedures in terms of short and long term survival in management of patients with obstructing carcinoma of left colon.[7-9,13,14]

This study was conducted to evaluate the morbidity and mortality of one stage operation i.e. emergency subtotal colectomy and

primary ileo-descending colon, ileo-sigmoid colon or ileo-rectal anastomosis in the management of patients with obstructing carcinoma of left colon.

MATERIAL AND METHODS

This study was conducted over 5 years period from January 2004 to December 2008. During this period 28 patients with obstructing left colon carcinoma were operated (single stage operation) in Department of Surgery, DHQ Teaching Hospital, Dera Ismail Khan. We had 18 male and 10 female patients.

All patients were received in emergency with large bowel obstruction. All these patients had plain abdominal x-ray films, which universally showed dilated colon. After taking baseline investigations patients were prepared for surgery by parenteral hydration, correction of electrolyte imbalance, parenteral antibiotics (triple regimen) and nasogastric decompression of stomach. Preoperative decompression of distended colon was not attempted in any case. All patients underwent subtotal colectomy and primary end to end ileo-descending colon, ileo-sigmoid colon or ileo-rectal anastomosis in two layers.

Patients were allowed liquids orally after first bowel movement. Antidiarrheal drugs like loperamide were used in patients who had diarrhea postoperatively.

Patients were then referred to oncologist for consideration of adjuvant chemotherapy and were followed up at outpatient department.

RESULTS

In this study age range of patients was from 23 to 69 years, with male to female ratio of 1.8:1 (18 male and 10 female patients).

Carcinoma was located in sigmoid colon in 20 (71.5%) patients, in descending colon in 4 (14.3%), in splenic flexure 2 (7.15%) and in transverse colon in 2 (7.15%) patients.

Procedures performed were subtotal colectomy and ileo-descending colon anastomosis in 2 (7.15%) patients, ileo-sigmoid anastomosis in 14 (50%), and ileo-rectal anastomosis in 12 (42.8%) patients.

Mean operative time was 112+31 minutes. The average hospital stay was 8 days.

Regarding complications, 3 (10.7%) patients developed minor complications like 2 (7.15%) patients had wound infection and 1 (3.6%) patient had atelectasis. One (3.6%) patients developed major complication of anastomotic leak, which was

Table 1: Clinical data of patients undergoing emergency subtotal colectomy.

		Number of patients
Total number of patients	28 (18 men, 10 women)	
Age (years)	23-69	
Location of tumor	Sigmoid colon	20
	Descending colon	4
	Splenic flexure	2
	Transverse colon	2
Type of Operation	Subtotal colectomy + Ileo-descending colon anastomosis	2
	Subtotal colectomy + ileo-sigmoid colon anastomosis	14
	Subtotal colectomy + ileo-rectal anastomosis	12
Operative time	112+31 minutes	
Hospital stay	Mean 8 days	
Perioperative mortality	0%	

treated by re-operation and the site was brought out as colostomy.

None of our patients died during procedure or in the early postoperative course with the resulting mortality rate of 0%.

The follow-up ranged from 10 to 60 months. During follow-up period 3 (10.7%) patients died of metastatic disease, 2 (7.15%) died of unrelated problems and 23 patients were alive and free of disease.

Postoperatively the use of antidiarrheal drugs was for limited time and the majority of the patients returned to 1 to 3 bowel movements per day depending upon the extent of colectomy. Majority of patients had normal diet and gained weight in short period of time.

DISCUSSION

Although a major procedure, we have performed subtotal colectomy and primary ileo-colic anastomosis in all cases of obstructing carcinomas of left colon, because of our special interest and experience in colorectal surgery. As for the patient is concerned, this procedure has uneventful post-operative course.

The advantages of this one stage resection and anastomosis are 1. saving of time and reduction in hospital costs 2. avoidance of risks of second surgery 3. elimination of waiting period because of second operation 4. avoidance of trouble and embarrassment resulting from temporary colostomy 5. avoidance of risks of metachronous tumors and removal of synchronous tumors at the same time if any 6. removal of loaded colon proximal to obstructing carcinoma is surgical preparation of gut for primary anastomosis because the colon distal to tumor is empty and clean and the contents of ileum can easily be emptied 7. ileocolic anastomotic healing is better as compared to colo-colic anastomosis because of rich blood supply of ileum.

We have not performed other options of one stage procedures like intra-operative colonic lavage because it is time consuming and has risk of contamination.[10]

The mean operative time in our study (112+31 minutes) is less than mentioned in literature (203+57.5 minutes).[8] The mean hospital stay for our patients was 8 days which is comparable to other studies which mention range of 8.4[14] to 18[13] days hospital stay for patients undergoing one stage subtotal colectomy. These figures are significantly less than the average hospital stay for the patients undergoing three stage operations.[15,16]

The rate of complications in our study was significantly lower than the accumulated complication rate encountered in the three stage operations.[15] Three (10.7%) patients in our study had minor complications like wound infection in 7.15% and atelactasis in 3.6% patients. Only 3.6% patients had major complication of anastomotic leak which was treated by re-operation and the anastomotic site was brought out as colostomy which was closed later on. The mortality rate for one stage operation range from 0-17%[13,14,17,18], which is less as compared to the mortality rates for three stage operations.

Postoperative course and quality of life for patients undergoing one stage subtotal colectomy and ileocolic anastomosis is excellent. Postoperative diarrhea is controlled by medication and these patients stabilize to 1-3 bowel movements per day with in few weeks depending upon the extent of resection. These patients enjoy normal diet without any restriction. These excellent postoperative results are supported by the literature.[13,14,16,18]

CONCLUSION

Subtotal colectomy and ileocolic anastomosis (one stage procedure) should be considered as the treatment of choice for patients of obstructing carcinoma of left colon because of its very low mortality rate, less postoperative complications, uneventful postoperative course and good quality of life.

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