

Palliative Surgery for Locally Recurrent Colorectal Cancer

D C N K Nyam, Y H Ho, A F P K Leong, F Seow-Choen

ABSTRACT

Background: Recurrent colorectal cancer carries a poor prognosis. Radical re-resection is the only chance for long-term survival but suitable candidates are few.

Aim: To determine the patterns of recurrence after potentially curative colorectal surgery and analyse the results of palliative surgery for patients with local recurrence.

Methods and Results: Between May 1989 and May 1995, 1,287 case records of patients with colorectal carcinoma were entered into a customised computer database. Of these, 1,103 underwent potentially curative resections (Duke's stage A, B and C). At a median of 40 months (range 2 – 72) following surgery, 173 patients had recurrent disease detected (98 males; 75 females) at a median of 14 months (range 3 – 30) after the index surgery. Twelve percent had recurrent distal and locoregional disease while 6.8% had locoregional recurrent disease alone. Thirty-seven patients with locally recurrent disease underwent surgery. Of these, only 7 patients with local recurrences were suitable candidates for resections. The remaining 30 underwent palliative surgery for emergent indications of obstruction (28) and bleeding (2). The symptoms were palliated surgically by an entero-enterostomy (13), defunctioning stoma (12), lysis of adhesions (1), exploratory celiotomy (2) and formalin application (2). Seventeen patients are alive at follow-up. Twenty patients died at a median of 4 months after surgery (range 1 – 15). All patients had palliation of their symptoms.

Conclusion: Low incidences of local recurrences can be achieved after potentially curative resections for colorectal carcinoma. When recurrences occur, a small number can be salvaged with a re-resection which is the procedure of choice. Palliative procedures for emergent indications of obstruction and bleeding can give good palliation despite the absence of the possibility of cure.

Keywords: colon, rectum, recurrent, palliative, surgery

INTRODUCTION

Once a properly executed resection has been done, there is a tendency for the surgeon to believe that the die is cast. As most recurrences are beyond the scope of surgery, all recurrences are apt to be considered

hopeless⁽¹⁾. Despite this, most reports of recurrent colorectal cancers deal primarily with resection of recurrent disease with the aim of cure. The role of surgery in the palliation of recurrent colorectal cancer is unclear and the prognosis following surgery is uncertain.

Most recurrences after a curative resection for colorectal surgery occur within two years of the index surgery. We set out to examine the patterns of recurrences in one specialised department and looked specifically at patients who had surgery to palliate the symptoms of recurrent disease to examine the prognosis and results in these patients.

MATERIALS AND METHODS

The case records of 1,287 consecutive patients undergoing open surgery for colorectal cancer in our department from May 1989 to May 1995 were analysed. Patient data were obtained from a prospectively compiled computer database. Of these, 1,103 patients underwent potentially curative resection (Duke's stage A, B and C). The patients were followed up three monthly for the first two years, six monthly for the next two years and yearly thereafter. Patients who did not turn up for follow-up appointments were rescheduled through a combination of telephone and postal reminders. At each visit, CEA levels were assayed and a full history and physical examination including a rectal examination was performed. Colonoscopy was performed annually or when patients were symptomatic.

Adjuvant chemotherapy was offered to patients with Duke's stage C colonic carcinoma if they had normal renal and liver function, aged between 18 – 70 and had a Zubrod performance status ≤ 2 . Rectal cancer with Duke's stage B and C were offered adjuvant chemoradiotherapy if they met the same criteria.

Recurrent disease was classified as disease detected more than a month post-operatively. Patients with residual disease at surgery were excluded. Local recurrence included recurrence at the site of surgery and the regional lymph nodes while distant recurrence was defined as disease distal to the regional lymph nodes. There were 173 patients who had recurrent disease who formed the cohort of this study.

RESULTS

Twelve percent (173/1103) of patients had recurrent disease (local and distant) detected after a median

Department of
Colorectal Surgery
Singapore General Hospital
Outram Road
Singapore 169608

D C N K Nyam, FRCS (Glas,
Edin), MMed (Surg), FAMS
Consultant

Y H Ho, FRCS (Glas, Edin),
FRACS, FAMS
Senior Consultant

A F P K Leong, MMed (Surg),
FRCS (Edin)
Consultant

F Seow-Choen, FRCS (Edin),
FAMS
Head & Senior Consultant

Correspondence to:
Mr D C N K Nyam

follow-up of 40 months (range 6 – 70). There were 98 males and 75 females. Of these, 98 had only distant disease, 40 had local recurrences and 35 had both local as well as distant disease detected. The recurrence rates by original stage of disease is tabulated in Table I. The median interval from the index surgery to discovery of the local recurrence was 14 months (range 3 – 30) while the median time for detection of distant disease was 13 months (range 1 – 48).

Distant metastasis

The most common site for distant metastasis was the liver followed by lung, brain and bone (Table II). Eleven patients presented with multiple site secondaries, most of which included carcinomatosis peritonei and 14 patients had metastatic disease in other organs as well.

At the time of follow-up, 90 patients had died. The mean time from index surgery to death in this group of patients was 8.5 months (range 1 – 31).

Table I – Recurrent disease after potentially curative resection for colorectal cancer

Original Duke's staging	Distant metastasis No (%)	Local recurrence No (%)	Total No
A	1 (1)	0	123
B	50 (11)	29 (6.0)	446
C	82 (15)	46 (8.6)	534

Table II – Distant metastasis after potentially curative resection for colorectal cancer (n = 1,103)

Site	No
Liver	74
Lung	27
Brain	4
Bone	3
Others	14
Multiple	11
Total	133

Local recurrence

Of the 75 patients with local recurrence, 37 patients were subjected to surgery. Seven of these patients had resection of their recurrent tumours. Of these, only two were curative as the remaining 5 patients were found to have positive margins on histology. The remaining 30 patients underwent palliative surgery for emergent indications of obstruction and bleeding. The procedures performed included an entero-enterostomy, stoma formation, lysis of adhesions, exploratory celiotomy and formalin application to tumours (Table III). All patients were palliated of their symptoms. Four patients died in the post-operative period from causes not directly related to their surgery:- pulmonary embolism (1); acute myocardial infarction (2), and advanced local disease (1). There were in addition, four post-operative complications

Table III – Surgery for locally recurrent colorectal cancer

Procedure	No
Resection	7
Bypass	12
Stoma	13
Lysis of adhesions	1
Laparotomy	2
Formalin application	2
Total	37

(11%). Each of the patients developed pneumonia, urinary tract infection and a pneumothorax from a central venous access insertion in the post-operative period. The final patient had a transection of the ureter repaired immediately during surgery. The median hospital stay was 14 days (range 6 – 28). Another 16 patients died in the follow-up period at a median of 4 months (range 1 – 15). Seventeen patients remain alive with the disease, but free of symptoms.

DISCUSSION

The rates of recurrent disease after "curative resection" ranges from 5% – 70% depending on the site and stage of the primary tumour. The sites of the first recurrence in a review⁽²⁾ was in the liver (33%), lung (22%), locoregional (21%), intraabdominal (18%) and retroperitoneal (10%). The present series parallels these data with 12% of patients developing recurrent disease after surgery for curative intent at a median of 40 months. The median survival of these patients after diagnosis was 8.5 months.

Locoregional recurrence ranges from small isolated failures in and around the anastomosis (10% – 20% of all recurrences after colectomy and low anterior resection)^(3,4) to diffuse involvement and carcinomatosis peritonei. Local recurrences are optimally treated at an early asymptomatic stage, when there is a greater potential for clear surgical margins at the time of resection. However, only a small proportion of patients are legitimate candidates for aggressive surgical treatment. These are patients with an early stage of recurrence or limited residual disease. Historically, 7% – 20% of patients with locally recurrent colorectal carcinoma can be cured by a second operation. The majority eventually succumb to repeat local or systemic disease recurrence. This means that only a select group of patients have extended survival after aggressive surgical management of a locally recurrent lesion. In the current series, there was a 7% (75/1103) local recurrence rate. Of these, only 9% (7/75) of patients with locally recurrent disease were subjected to a re-resection. Of these, only two were curative in intent.

Presently, less than 4% of patients with locoregional recurrent colorectal cancer who did not undergo surgery are still alive 5 years on. The median

life expectancy after the diagnosis is in terms of months^(5,6). Between 72% – 89% of these patients die of locally advanced disease^(7,8) with the majority of the remainder dying of metastatic disease.

Metastatic disease involving the serosal surfaces of the intestine, peritoneal implants, liver metastases or extensive pelvic disease (involving the pelvic side walls, sciatic notch, extending to the sacral promontory or large pelvic vessels with significant secondary leg oedema) precludes surgical intervention for cure. Forty percent (30/75) of these patients however had symptoms of bleeding or obstruction that required surgical intervention, the majority being for the latter. It is interesting that symptomatic bleeding occurs in recurrent tumours that are low in the pelvis and amenable to topical formalin application. This may be due to the fact that fresh bleeding per rectum is an easily recognisable symptom and causes much distress to patients. Small oozing higher up in the colon usually presents with anemia and not malena. We did not see any case of massive lower gastrointestinal bleeding from recurrent tumour.

Death from intestinal obstruction entails great suffering from the distension and pain initially and finally peritonitis from perforation. It can be a long drawn out affair causing extreme grief to both the patients and their relatives. The mortality rate following surgery is at least 10% in these patients but this is acceptable as is the morbidity rate of 11%. The patients stay an average of two weeks in hospital and are discharge home for the remainder of their 4 months survival. All our patients were palliated of their symptoms.

CONCLUSIONS

A low incidence of local recurrences can be achieved after potentially curative resections; when recurrences occur, only a small number can be salvaged with a re-resection. For patients in whom surgery for cure is not an option, palliative procedures for emergent symptoms of bleeding and obstruction can give good palliation and should not be withheld despite the dismal state of affairs.

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CORRIGENDUM

Conversation with Past Presidents
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We apologise for the errors in the following sentence, "Shall we be considering a listing on the percentage of wine of HMOs that can be used for alternative purposes?". It should read as "Should we be considering a listing on the percentage of income of HMOs that can be used for administrative purposes?"