

Colonoscopic follow-up following Surgery for colon cancers

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ABSTRACT : Endoscopic examination following surgery for the treatment of carcinoma of the colon and rectum in the postoperative follow-up is evaluated on the basis of clinical experience.

- 1) Postoperative constriction at anastomosis was remarkable in the rectum rather than in the colon. However, there was no clinical significance in terms of symptoms.
- 2) Surgeons should pay attention to new growth of second tumor as well as to the presence of local recurrence at early stage by means of periodic intervals of colonoscopy.

INTRODUCTION

Colonoscopic examination has developed and has been prevalent in precise diagnosis of the diseases of the colon. Needless to say, it is essential not only to determination of precise diagnosis for various diseases of the colon but also to follow-up after surgery for colon cancers in the postoperative course.

Postoperative colonoscopic examination is of great value to detect recurrence of carcinoma in an early stage or evolution of newly growing carcinomas which are more often arising from polyps.

In this study, we aimed at evaluating the clinical values of postoperative colonoscopic examination for follow-up study on the basic of our clinical experience.

MATERIAL AND METHOD

From January 1981 to December 1988, 89 cases who underwent surgical excision for carcinoma of the colon and rectum (52 : colon

cancers, 37 : rectal cancers) were followed up by a total of 211 colonoscopic examinations in the First Department of Surgery, Nagasaki University School of Medicine. The frequency of colonoscopic examination was shown in Fig 1.

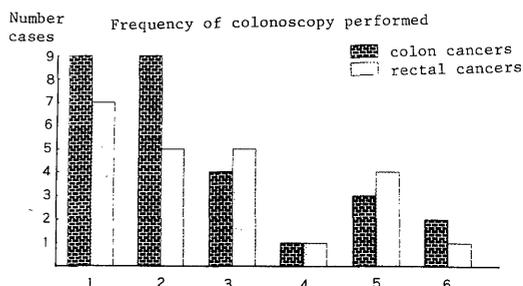


Fig. 1. Frequency of colonoscopy performed

The frequency ranged from 1 to 6. In most patients it is indicated that the follow-up study by colonoscopic examination is clinically prevalent from year to year.

The results of endoscopic findings in combination with histologic examinations were as shown in Table 1.

Table. Eligible cases 52 in colon cancers
37 in rectal cancers

	colon cancers	rectal cancers
no abnormal finding	25 (48 %)	15 (41%)
polyp	23 (44 %)	12 (32%)
carcinoma	4 (7.6%)	5 (14%)
constricture	2 (3.8%)	5 (14%)

About half of them had no abnormal finding. Carcinomas were found in 4 (7.6%) of postoperative colon cancers and in 5 (14%) of postoperative rectal one. Postoperative constrictions, which corresponded to being narrow as small as less than one third of conventional lumen at anastomosis, without symptom, were noted in 2 (3.8%) who underwent surgery for colon cancers and in 5 (14%) surgery for rectal cancers. On the other hand, polyps were detected in 23 (44%) who underwent surgery for colon cancers and in 12 (32%) surgery for rectal cancers.

When compared between cancers arising from the colon and the rectum, the differences were shown in Table 2 and 3.

The first operations for rectal cancers were local excision in 1, anterior resection in 3 and pull through in 1. The locations of recurrent

carcinomas were Rb in 2, Rp in 1, Ras in 1, Ra in 1 respectively. The disease-free intervals ranged from 6 months to 4 years and 9 months.

All but one, in whom surgery was refused, were operated upon including one with pelvic exenteration.

Meanwhile, recurrences arising from colon cancers were seen in 4. The locations of the tumor detected were the descending colon and the transverse colon in 3, the sigmoid colon in 1. There was no relation in the locations between the initial and the recurrent tumors.

The disease-free intervals ranged from 10 months to 5 years and 9 months. All tumors were resected and the patients are doing well.

DISCUSSION

Recently colon cancers are increasing in

Table 2. Carcinoma detected by colonoscopy following surgery for colon cancers

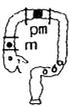
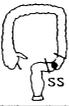
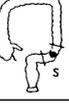
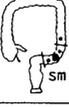
case age sex	First operation		endoscopic diagnosis		reoperation
	op date	op method	Disease free interval		
MK 63 M	Nov 1985	T resect A resect	Nov 1987 2 yrs	Dec 1987 RHC	
MK 70 M	Jun 1984	S resect	Aug 1986 2.1yrs	Sep 1986 RHC	
TO 60 M	Aug 1981	S resect	May 1987 5.9yrs	Jun 1987 RHC	
HU 60 M	May 1985	S resect	March 1987 10m	March 1987 endoscop polypectomy	

Table 3. Carcinoma detected by colonoscopy following surgery for rectal cancers

case age sex	First operation		endoscopic diagnosis		reoperation	
	op date	op method	Disease tree interval			
TM 39 F	Fev 1984	low ant r.		May 1985 1.3 yrs	non	
YK 60 M	Aug 1985	low aut r		May 1987 1.9 yrs	Sep 1987 pelvic exenterat	
SO 47 F	Nov 1986	low ant. r		Oct 1987 2.2 yrs	Oct 1987 Miles op	
TY 64 F	Jul 1979	pull through		May 1987 6 M	Jun 1987 Miles op 1-lat hepat	
TY 64 F	Jul 1979	pull-through		Apr 1984 4.9 yrs	Aug 1985 Miles op	

occurrence in accordance with advances in nutritional life style in which Western style food has become more preferred.

Furthermore, it is accepted that multiple cancers frequently develop in the large intestine.¹⁾ Physicians are paying attention to the presence of adenomatous polyp as a precancerous neoplasma. In general, simultaneous coexisting cancers are liable to be missed on the basis of the fact that colonoscopic examination can not be conducted in the stenotic lesions which is a barrier to pass through the colonoscopic tube to the proximal colon so as to make a precise diagnosis.

To overcome this handicaps and to minimize overlooking the residual lesions, intraoperative colonoscopy is commonly used for correct examination of the residual portion of the large intestine.^{2), 3)} Surgeons look for simultaneous coexistence of colon cancers to prevent a residue of cancerous lesion to the residual colon. Usually an advanced cancerous lesion produces so severely stenotic lesion that other lesions arising the proximal colon tend to be overlooked.

Postoperative follow-up observation by using colonoscopy is of great benefit to know the postoperative state at anastomosis, changes in the sizes of residual polyps and/or appearance of newly growing cancer or polyp.

A presence of stenosis to some extent at anastomosis in the rectum was noted, although not so often in the colon. However, it did not arouse any symptom referable to stenosis. Ischemic affection at anastomosis is one of the causes of stenosis in the rectum. Inverted suture line by stapler which was often used for low anterior resection causes stenosis at anastomosis in the rectum. However, these lesions did not require reoperation due to difficulty in defecation. It is generally accepted that most of colon cancers may arise from adenomatous polyp except for a few de novo carcinomas and also colon cancers concomitantly accompany polyps. Therefore, obligatory preoperative examination for residual polyp is recommended. Endoscopic polypectomy is now prevalent for the treatment of polyps arising from the colon. Needless to say, complication related to endoscopy should be reduced.^{4), 5)} On the other

hand, stenotic lesion caused by carcinoma prevent the introduction of colonoscopic tube to conduct endoscopic polypectomy and to examine endoscopic examination. Therefore application of colonoscopy intraoperatively and its clinical usefulness have been reported and it is defined that this method has become greatly valid.⁶⁾ It is documented that when polypoid lesions of the colon by intraoperative endoscopy are incidentally detected, successful removal has been recommended.⁷⁾ This procedure also is effective in avoidance of early appearance of recurrence including new growth from polypoid lesions.

As far as postoperative colonoscopy is concerned, it is necessary to know the healing state at anastomosis and to detect recurrence in early stage. Surgeons should be aware of being multicentric in the genesis of colon cancers. Therefore, in the postoperative follow-up study of carcinoma of the colon, periodic colonoscopy is a clinical need and of great benefit. Wayc⁸⁾ cited that at least 10% of early carcinoma will be overlooked by colonoscopy and Williams⁹⁾ also reported that 5 (8%) out of 63 cases which had a 7mm sized abnormal polyps were overlooked by endoscopic examination although they were detected by fluoroscopic examination. In particular, recurrence is more often seen in those who had the treatment for rectal cancers than colon cancers. The frequency of postoperative colonoscopy should be increased much more after surgery for rectal cancers than for colon cancers.

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