

• LARGE INTESTINAL CANCER •

Colonoscopic screening and follow-up for colorectal cancer in the elderly

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Abstract

AIM: To improve the prevention and treatment of senile patients with colorectal cancer by evaluating the importance of colonoscopy in clinical screening and follow-up.

METHODS: Clinical screening of colonoscopy was performed for 2196 patients aged 60-90 years old according to the protocol, and 1740 of them (79.2%) were followed-up.

RESULTS: Colorectal cancer was found in 52 patients, and the detectable rate was 2.4%. Among them, 19 were diagnosed as early colorectal cancer, accounting for 36.5% of the detected colorectal cancer. Among the followed-up patients, early colorectal cancer was found in 9, accounting for 45.0% of the detected colorectal cancer. The resectable rate and 5 years survival rate of colorectal cancer were 97.7% and 80.9% respectively. The incidence of complication was 0.05%, and the successful rate of cecum intubation was 98.9%.

CONCLUSION: Colonoscopic screening and follow-up of the elderly for colorectal cancer and pre-cancerous lesion (adenomatoid polyp) can increase the detectable rate of early colorectal cancer and improve its prevention and treatment.

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INTRODUCTION

Sequential method is usually used in clinical screening of colorectal cancer^[1-3], but some experts hold that direct sigmoidoscopy should be performed for the screening of large intestinal cancer^[4-6]. Colonoscopy screening of large intestinal cancer is advocated abroad due to the significant incidence of proximal cancer of colon in the past 10 years^[7-14]. Colonoscopy screening and follow-up were conducted for 2196 old patients who had not received barium enema contrast radiography from September 1985 to July 1998 in this study.

MATERIALS AND METHODS

All the 2196 patients to be screened were retired or veteran officers in active service. Age ranged from 60 to 90 (averaged 70.5) years old, 2067 male and 129 female. Enteroscopy was performed for 8298 with

times, and 1740 of the 2196 patients (79.2%) were followed-up for 1-12 years. The number of follow-up per patient was 4.5 times and the time of follow-up per patient was 5.9 years. Among the screened patients, 1618 (73.7%) were asymptomatic. The main symptoms of the remainder were anorexia, abdominal uncomfortableness, constipation, irregular feces and loss of body weight. Among the 2196 patients, heart disease, encephalopathy, lung disease and nephrosis were found in 1911 (87.0%), in which more than 3 vital organ diseases were found in 534 (24.3%). 639 patients (29.1%) were found to have a history of abdominal operation such as subtotal gastrectomy, cholecystectomy, appendectomy, abdominal exploratory operation and colon cancer operation.

Colonoscopy screening was performed by using Olympus CF-MB3W, CF-IBM, PCF-10, CF-1T20I, CF-V10L, CF-200L colonoscopes made in Japan, and colonoscopic follow-up was conducted according to the patients' physical conditions every years.

RESULTS

The detectable rate of colorectal polypus

Among the 2196 patients, 9893 polypi were found in 1364 (62.1%), in which 8587 polyps were detected in 1618 asymptomatic patients (86.8%). 3435 and 6458 polypi were found in the first diagnosis and follow-up respectively, which accounted for 65.3% of the total detected polypi. Among the 8537 polypi confirmed by pathologic examination, 1841 (21.6%) were inflammatory polypi, and 5801 (67.9%) were adenomatoid polypi, and 895 (10.5%) were hyperplastic and hamartoma. 21 were adenomatoid polypi with malignant transformation, accounting for 0.2% of the detected colorectal polypi.

The detectable rate and follow-up of colorectal cancer

Among the 2196 patients, colorectal cancer was found in 52 patients, and the detectable rate was 2.4%. Among the 52 patients with colorectal cancer, early colorectal cancer and early multiple colorectal cancer were found in 19 (36.5%) and in 3 (5.8%) respectively, and 22 early cancerous foci were found as well. Among the asymptomatic patients, colorectal cancer was found in 24, which accounted for 46.2% of the total detected colorectal cancer, and early colorectal cancer was found in 13 asymptomatic patients, which accounted for 54.2% of the total asymptomatic colorectal cancer. Colorectal cancer was found in 20, and early colorectal cancer in 9 of them (45.0%) during the follow-up, which was higher than that (31.3%) by colonoscopic screening. Surgical treatment was performed for 24 of the 32 patients with colorectal cancer found in the screening. The Duck's pathologic staging was as follows: 7 patients (29.2%) were in stage A, 15 (62.5%) in stage B, and 2 (8.3%) in stage C.

Treatment and prognosis of the patients with colorectal cancer

Treatment of the 52 patients with colorectal cancer was shown in Table 1. Surgical operation and or electric coagulation resection under colonoscope was performed according to the patient's condition. Among the 44 patients who received surgical treatment,

colectostomy was performed for 43 (97.7%) with all the early colorectal cancer removed (100.0%). 22 survived for more than 5 years, and 5 years survival rate was 80.9% (Figure 1).

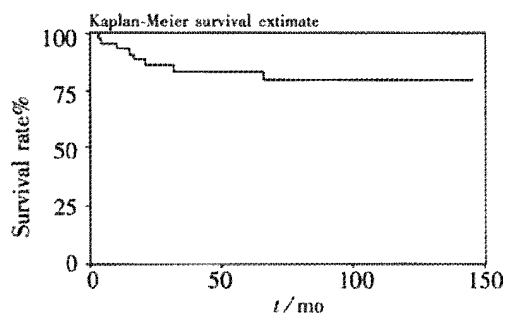


Figure 1 The survival curve of 44 operated patients with colorectal cancer

Table 1 Treatment of 52 patients with colorectal cancer

Type of cancer	n	Treated by endoscope	Operation		Not operated	Not followed up
			Removed	Not removed		
Early	19	6	12	0	1	0
Progressive	33	0	31	1	0	1

Complication and successful rate of intubation

8298 times of colonoscopy were performed, in which the incidence rate of complication was 0.05%, complication was found in 4 patients (bleeding in 2 and collapse in 2), and the successful rate of intubation was 98.9%. Colonoscopy was not performed in the ileocecum of 91 patients due to their poor tolerance, history of abdominal operation, long and tortuous intestinal canal, obstruction by tumors, and poor preparation of intestinal tract.

DISCUSSION

Colonoscopic clinical screening and follow-up is an ideal method for the detection of early colorectal cancer and pre-cancerous lesion (adenoma). In this study, clinical screening and follow-up by colonoscopy were performed for patients over 60 years old, and the detectable rate of colorectal cancer was 2.4%, and the detectable rate of early colorectal cancer was 36.5%, which was higher than that (21.0%) reported by using screening method^[15,16]. The detectable rate of early colorectal cancer was 15.2-16.8% in this country^[17,18], and 45.0% in our follow-up by colonoscopy. It indicates that persistent follow-up by colonoscopy is of great importance for the detection of early colorectal cancer. Among the 2196 screened patients, colorectal polypi was found in 1364 (62.1%), and 67.9% of them were adenomatoid polyps confirmed by pathologic examination. The detected polypi by colonoscopy in the follow-up accounted for 65.2% of the total detected polypi. Therefore, we hold that colonoscopic screening should be performed for the patients over 60 years old including those with no symptoms, and those with their adenomas removed. The latter should be followed up every year. Experts^[14,19] also advocated that colonoscopic screening should be performed for the ordinary population every year, because they believed that it was more economic and effective for the patients over 60 years old.

Clinical screening and follow-up by colonoscopy lead to the prompt treatment of colorectal cancer and improve the excision rate and 5 years survival rate of the patients with colorectal cancer, which are higher than those (71-92.8% and 62-74%)^[20-24] reported in other countries and are significantly higher than those (84.8% and 53.0%) reported in China^[25]. The treatment of pre-cancerous lesion (adenomatoid polyp) under colonoscopy reduced the incidence of colorectal cancer and improved its prevention and treatment. 9566 of

the 9893 (96.7%) colorectal polypi were treated under colonoscopy. Among the 21 cancerous polypi, surgical operation and excision under colonoscopy were performed for 20 patients respectively, except one case due to the patient's condition. Researchers found that the incidence of colorectal cancer can be decreased by 76-90% by removing adenomatoid polypus under colonoscopy with the recurrent and regenerated adenomas resected in the follow-up by colonoscopy^[26-28]. The colorectal polypi were treated when clinical screening and follow-up by colonoscopy were performed in this study. It would greatly decrease the expected incidence of colorectal cancer.

In this study 87% of the patients suffered from multiple organ diseases such as heart disease, encephalopathy, and nephrosis, and 24.3% of them had diseases in more than 3 vital organs, but the incidence of complication was significantly lower than that (0.4-1.4%)^[29-31] with no occurrence of death and perforation^[31] as a result of the improvement of intestinal canal preparation, simplification of colonoscopy intubation, and the appropriate measures taken for them according to the changes of their blood pressure and ECG when colonoscopy was performed. 29.2% of the patients in this study had a history of abdominal operation, but the successful rate of intubation was 98.9%. Therefore, we hold that clinical screening and follow-up by colonoscopy for old patients can lead to early diagnosis and treatment of patients with colorectal cancer and pre-cancerous lesion (adenomatoid polypus), and it is a safe and effective method to detect early colorectal cancer and decrease the death rate of colorectal cancer.

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