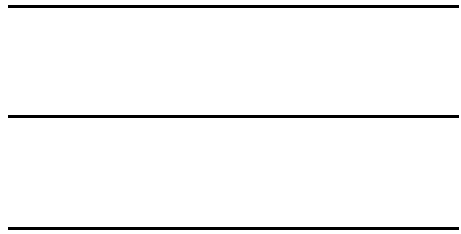


2003 6 4



2003 4 23

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I.	3
II.	
1.	7
2.	7
3.	8
III.	
1.	10
2.	12
3.	12
4.	15
5.	17
6.	18
7.	20
IV.	22
V.	27
	28
	31

1.	11
2.	14
3.	16
4.	17
5.	18
6.	19
7.	21

4

2

가

가

, S

가

가

1998

1

2001

12

1162

821 (70.7%), S

151 (13%),

190 (16.3%)

972 , 1
 516 (53.0%) . 가
 645 292 (45.3%) ,
 (advanced colonic polyp) 109 (16.7%) ,
 40 (6.2%) .
 , 가
 가 ,
 . ($p < 0.05$)

가 ,
 1

: , , , , ,
 ,

< >

I.

4 ,

2 . Bond

(lifetime risk) 6% ,

56,000 .¹

가 ,

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, 가 , , , , ,

, 가 , *streptococcus bovis* ,

schistosoma .²

,

- 가

, Winawer

³,

가

, Hogan

94%, 67%

⁴, Rex

95%, 84%

⁵,

가

가

,

가

(synchronous polyp)

(synchronous cancer)

,

가

가

가

가 . 1999

(American Society for Gastrointestinal Endoscopy)

, 1cm (neoplastic polyp)

,

6 1

가 .⁶

가 3 가

(metachronous cancer)

가 ,

⁷, 가

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가

가 ,

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30-50%

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30-40%

8,

9%

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II.

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1998 1

2001 12

, 가 , ,

가

1162

2-5

가

(familial adenomatous polyposis)

(hereditary nonpolyposis colorectal cancer) 가

가

(inflammatory bowel disease)

2.

가

1

. ,
 1
 , (advanced
 colorectal polyp) 1cm (tubular
 adenoma) (villous) 가
 (dysplasia) .
 , ,
 , , ,
 , (Duke stage),
 CEA . S 가 S
 , , ,
 , , ,
 가

3.

SPSS(Windows release 11.0) package

, 가 x-square

Fisher' s Exact test, independent-sample T-test

95% .

III.

1.

1162	
972	190 (16.4%)
972	58.74 (22 -91)
1.4:1	가 가
9 (0.9%)	가 6 (0.6%)
821 (84.0%), S	151 (16%)
	16 (1.6%), 153 (15.7%),
7 (0.7%),	33 (3.4%), 1 (0.1%),
34 (3.5%), S	209 (21.5%), 519 (53.4%)
	, A 35 (3.6%), B1
120 (12.3%), B2	353 (36.3%), C1
22 (2.3%), C2	322 (33.1%), D 117 (12%)

.(Table 1)

1.

Number of enrolled patients	972	
Age (years)		
Mean	58.74	
Range	22-91	
Gender (number of patients)		
Male	572	58.8%
Female	400	41.2%
Initial evaluation (number of patients)		
Colonoscopy	821	84.0%
Sigmoidoscopy	151	16.0%
Cancer site (number of patients)		
Cecum & appendix	16	1.6%
Ascending colon	153	15.7%
Hepatic flexure	7	0.7%
Transverse colon	33	3.4%
Splenic flexure	1	0.1%
Descending colon	34	3.5%
Sigmoid colon	209	21.5%
Rectum	519	53.4%
Operation (number of patients)		
Low anterior resection & anterior resection	593	61.0%
Abdominoperineal resection	127	13.1%
Right hemicolectomy	192	19.8%
Transverse colectomy	8	0.8%
Left hemicolectomy	23	2.4%
Segmental resection	23	2.4%
Other	6	0.6%
Stage(modified Duke stage, number of patients)		
A	35	3.6%
B1	120	12.3%
B2	353	36.3%
C1	22	2.3%
C2	322	33.1%
D	117	12%

2.

가 319 (32.8%),
653 (67.2%) .
가가 467 (71.5%), S
148 (22.7%),
38 (5.8%) .
1
197 ,
1998 2001
972 , 1
516 (53.0%) .

3.

1

,

가 645

292 (45.3%) .

S

가 208 84

.

1 가 133 (45.5%), 2 가

70 (24.0%), 10 가

11 (3.7%) . 804

, 16 (2.0%)

130 (16.2%), 47 (24%), 166 (20.6%),

67 (8.3%), S 232(28.9%), 128 (15.9%)

S 가 . 5

mm 가 195 (24.3%), 5 mm 9 mm 가 435 (54.1%), 10

mm 20 mm 가 147 (18.3%), 20 mm 27 (3.4%) ,

Is 506 (62.9%), lsp 133 (16.5%), lp 132 (16,4%), lla

31 (3.9%) , 5 mm 10 mm Is 가

. 619

403 , 73 ,

3 , 25 48 .(Table

2)

2.

Synchronous polyp (number of patients/number of polyps)		292 / 804	
<i>Primary cancer site (number of patients)</i>			
Cecum & appendix	3	1.0%	
Ascending colon	61	20.9%	
Hepatic flexure	1	0.3%	
Transverse colon	10	3.4%	
Splenic flexure	0	0.0%	
Descending colon	9	3.1%	
Sigmoid colon	88	30.1%	
Rectum	120	41.1%	
<i>Number of synchronous polyp (number of patients)</i>			
1	133	45.5%	
2	70	24.0%	
3	37	12.7%	
4-10	41	14.4%	
11-20	10	3.4%	
Above 20	1	0.3%	
<i>Site (number of polyps)</i>			
Cecum	16	2.0%	
Ascending colon	130	16.2%	
Hepatic flexure	47	24.0%	
Transverse colon	166	20.6%	
Descending colon	67	8.3%	
Sigmoid colon	232	28.9%	
Rectum	128	15.9%	
<i>Size (number of polyps)</i>			
< 5mm	195	24.3%	
5mm -9mm	435	54.1%	
10mm-20mm	147	18.3%	
> 20mm	27	3.4%	
<i>Shape (number of polyps)</i>			
Is	506	62.9%	
Isp	233	16.5%	
Ip	132	16.4%	
Ila	31	3.9%	
<i>Histology (number of polyps)</i>			
Tubular	403	50.1%	
Tubulovillous	73	9.1%	
Villous	3	0.4%	
Hyperplastic	25	3.1%	
Inflammation	22	2.7%	
Adenocarcinoma	48	6.0%	
Others	3	0.4%	
No Biopsy	186	23.1%	

(advanced colorectal polyp)

645 109 (16.7%) .
72 37 ,
40 (36.7%), 13 (11.9%) .
204
S 가 , 5 mm
가 6 (2.9%), 5 mm 9 mm 가 54 (26.5%), 10 mm 20
mm 가 118 (57.8%), 20 mm 26 (12.7%) .(Table 3)

4.

, ,
가 61.96
가 55.47 ($p<0.05$),
가 가 2.5:1
가 ($p<0.05$). ,
, , CEA
,
가
($p<0.05$). (Table 4)

3.

Advanced synchronous colonic polyp (number of patients/number of polyps)		109 / 204
Primary cancer site (number of patients)		
Cecum & appendix	1	0.9%
Ascending colon	26	23.9%
Hepatic flexure	0	0.0%
Transverse colon	6	5.5%
Descending colon	4	3.7%
Sigmoid colon	33	30.3%
Rectum	39	35.8%
Number of advanced synchronous colonic polyp (number of patients)		
1	78	71.6%
2	17	15.6%
3	5	4.6%
4-10	6	5.5%
Above 10	3	2.7%
Site (number of polyps)		
Cecum & appendix	1	0.5%
Ascending colon	36	17.6%
Hepatic flexure	6	2.9%
Transverse colon	31	15.2%
Splenic flexure	4	2.0%
Descending colon	13	6.4%
Sigmoid colon	76	37.3%
Rectum	37	18.1%
Size (number of polyps)		
< 5 mm	6	2.9%
5 mm – 9 mm	54	26.5%
10 mm – 20 mm	118	57.8%
> 20 mm	26	12.7%
Shape (number of polyps)		
Is	76	37.3%
Isp	32	15.7%
Ip	81	39.7%
Ila	15	7.4%
Histology (number of polyps)		
Tubular	80	39.2%
Tubulovillous	73	35.8%
Villous	3	1.5%
Adenocarcinoma	48	23.5%

4.

	Patients with synchronous polyp (n = 292)	Patients without synchronous polyp (n = 353)
Age (year) *	61.96 ± 8.87	55.47 ± 11.75
Gender (patients) *		
Male / Female	214 / 78	166 / 187
Size of primary cancer (cm)	5.59 ± 2.70	5.67 ± 2.56
Primary cancer site *		
RS ¹ / proximal ²	208 / 84	192 / 161
Primary cancer stage		
A	16	14
B1	46	42
B2	107	136
C1	6	10
C2	97	112
D	20	38

¹: sigmoid colon, rectum

²: cecum, ascending colon, hepatic flexure, transverse colon, splenic flexure, descending colon

* p -value < 0.05

5.

, 가 62.59
 가 57.56
 ($p < 0.05$), 3.4:1 가
 ($p < 0.05$). , , ,
 , CEA
 .(Table 5)

5.

	Patients with advanced synchronous polyp (n = 109)	Patients without advanced synchronous polyp (n = 536)
Age(year) *	62.59 ± 8.56	57.56 ± 11.28
Gender(patients) *		
Male / Female	84 / 25	328 / 208
Size of primary cancer (cm)	5.75 ± 3.01	5.60 ± 2.54
Primary cancer site		
RS ¹ / proximal ²	72 / 37	328 / 208
Primary cancer stage		
A	5	25
B1	16	72
B2	43	200
C1	2	14
C2	36	173
D	7	51

¹: sigmoid colon, rectum

²: cecum, ascending colon, hepatic flexure, transverse colon, splenic flexure, descending colon

* *p*-value < 0.05

6.

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1

, 645

1

166 (25.7%)

. 41 , 1

.

85 , 3 (3.5%)
 19 (22.4%), 9 (10.6%), 22 (25.9%),
 10 (11.8%), S 13(15.3%), 8 (9.4%)
 . Is 66 (77.6%), Isp
 9 (10.6%), Ip 7 (8.2%), IIa 3 (3.5%) , 5 mm
 - 9 mm 가 .
 57 40 ,
 6 1 .(Table 6)
 6.

Metachronous polyp (number of patients/number of polyps)		42 / 85	
<i>Primary cancer site (number of patients)</i>			
Ascending colon	15	35.7%	
Hepatic flexure	7	16.7%	
Transverse colon	7	16.7%	
Descending colon	4	9.5%	
Sigmoid colon	5	11.9%	
Rectum	4	9.5%	
<i>Number of metachronous polyp (number of patients)</i>			
1	20	47.6%	
2	7	16.7%	
3	10	23.8%	
4	4	9.5%	
5	1	2.4%	
<i>Site (number of polyps)</i>			
Cecum	3	3.5%	
Ascending colon	19	22.4%	
Hepatic flexure	9	10.6%	
Transverse colon	22	25.9%	
Splenic flexure	1	1.2%	
Descending colon	10	11.8%	
Sigmoid colon	13	15.3%	
Rectum	8	9.4%	

7.

	Patients with metachronous polyp (n = 44)	Patients without metachronous polyp (n = 124)
Age (year)	58.00 ± 10.34	56.41 ± 10.52
Gender (patients)		
Male / Female	31 / 11	75 / 49
Size of primary cancer (cm)	5.47 ± 2.36	6.37 ± 2.69
Primary cancer site		
RS ¹ / proximal ²	26 / 16	59 / 65
Primary cancer stage		
A	2	2
B1	7	9
B2	19	60
C1	1	2
C2	12	46
D	1	5
Synchronous polyp*		
Positive	27	33
Negative	15	91
Advanced synchronous polyp*		
Positive	15	9
Negative	27	115
Synchronous cancer*		
Positive	8	1
Negative	34	123

¹: sigmoid colon, rectum

²: cecum, ascending colon, hepatic flexure, transverse colon, splenic flexure, descending colon

* *p*-value < 0.05

IV.

가 가 , S
 S .
 , Collett (neoplasm)
 30% ¹⁰, Lewis
 2-5%
 ,
 가 ¹¹ .
 McGarrity S ,
 ,
 가 ¹² ,
 가 S
 . ,
 S 가
 ,
 가 .

가 ,

가 가 S

. Scintu 521 50.4%

가 가 , 4

13 .

972

가 가 319 (32.8%) ,

S 가

467 (48%), 148 (15%) .

가

67% ,

Neught

27-30% ¹⁴, Arenas

가 가 29.8% ,

3.5% ¹⁵. Takeuchi

225 9 (4%)

¹⁶, Barillari

14%, 4%

17.

1

가

645

292 (45.3%)

13 (2.0%),

40 (6.2%)

645

가

61.96

($p < 0.05$),

가

($p < 0.05$),

가

($p < 0.05$),

1cm

16.7%

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($p < 0.05$),

가 ($p < 0.05$),

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($p < 0.05$).

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Abstract

The Synchronous and Metachronous Polyp after curative resection in Colorectal Cancer

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(Directed by professor Won Ho Kim)

Background: Colorectal cancer is one of the most common malignancies in western country and its incidence has been increasing in Korea. The complete examination of the large bowel should be performed before curative surgical resection to clear the colon of all synchronous cancers and polyps. However, in cases of tumor obstruction or using the sigmoidoscopy, evaluation of total colon in the preoperative period may be incomplete. The aim of this study is to analyze the characteristics of synchronous and metachronous polyps.

Materials and methods: From Jan. 1998 to Dec. 2001, 1,162 patients,

who underwent curative resection for colorectal cancer, were enrolled. The data of preoperative and postoperative colonoscopic examination were collected by review of medical records.

Results : The initial preoperative endoscopic examination of colorectal cancer was performed in 972 patients (colonoscopy 821 patients, sigmoidoscopy 151 patients). In 67.2 % of the cases (653 patients), the initial endoscopic evaluation of total colon was incomplete due to tumor obstruction (467 patients) and sigmoidoscopic examination (148 patients). The postoperative colonoscopy was performed within one year to complete endoscopic evaluation in 197 patients of 653 patients who underwent incomplete endoscopic evaluation. So, 53% (516 patients) of the all cases completed total colonoscopic evaluation during the perioperative period.

In 645 patients who had completed total colonic evaluation, 45.3% (292 patients) had the synchronous polyps, 16.7% (109 patients) advanced colorectal polyps, and 6.2% (40 patients) synchronous cancer. The incidence of synchronous polyps was higher in old age, male, and recto-sigmoid colon cancer ($p < 0.05$),

and that of advanced synchronous polyp was higher in old age, male ($p < 0.05$). And the presence of synchronous polyp increased the risk of developing metachronous polyp ($p < 0.05$).

Conclusion: Initial complete colonoscopic evaluation of the large bowel should be performed before curative resection of colorectal cancer. If this is not feasible, a complete postoperative examination of total colon should be performed within 1 year of resection. The identification and removal of synchronous or metachronous polyps during the perioperative period is recommended for reducing the risk of development of colorectal cancer.

Key words: colorectal cancer, curative resection, synchronous polyp, synchronous cancer, metachronous polyp, metachronous cancer