

Clinicopathological Analysis of Superficial Spreading and Small-sized Types of Early Gastric Cancer

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Purpose: The superficial spreading type of early gastric cancer has different clinicopathologic features from other types of early gastric cancers in terms of its invasiveness and lymph node metastases. Therefore, the clinicopathological features of the superficial spreading type and the small-sized early gastric cancers, were analyzed, and the influence of those features on the surgical procedures and prognosis was investigated.

Methods: During an 8-year period (1992-1999), 22 superficial spreading early gastric cancers were analyzed with respect to the macroscopic type, lymph node metastasis, and the surgical procedure, and compared with those of 219 small-sized early gastric cancers. The superficial spreading type was defined as a lesion more than 5×5 cm and small-sized type, as a lesion less than 2×2 cm. The survival rate was analyzed using the Kaplan-Meier method and those patients who died of diseases unrelated to gastric cancer were excluded. Other statistical analyses were performed using the chi-square test.

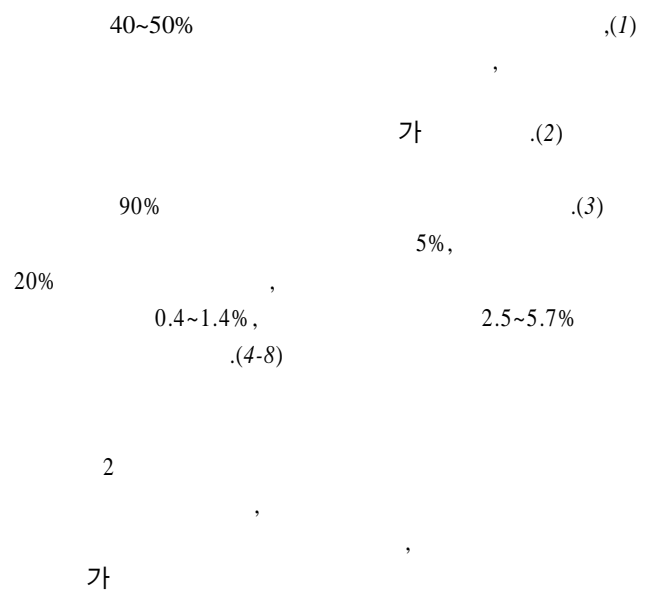
Results: Twenty two out of 369 (6%) early gastric cancers were the superficial spreading type. The incidence of a LN metastasis was 12.3% in early gastric cancer, 8.7% in the small-sized type, and 27.3% in the superficial spreading type. The incidence of a LN metastasis was greater in the superficial spreading type than in the small-sized type (P=0.006). The location of the lesions, the histological type, and the depth of the invasion in the superficial spreading and small-sized early gastric cancers were similar.

There was difference in the method of surgery and the extent of the lymph node dissection between two groups. **Conclusion:** Because the incidence of a lymph node metastasis is higher in the superficial spreading type than in the small-sized early gastric cancer, a wide resection with an extensive lymph node dissection appears to be appropriate treatment for the superficial spreading type of early gastric cancer. (J Korean Surg Soc 2003;64:212-218)

Key Words: Early gastric cancer, Superficial spreading type, Small-sized type, Clinicopathologic features

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(9,10) 가 가

가 가 . 369 22 (6%)
 , 12 , 10
 219 (59.3%) , 128 , 91

가

가 . 1)
 가 5 cm
 (superficial spread-
 (11) 가 58.2 , 가 55 ,
 가 55.7 , 가 56.9
 1 : 1.2,
 (Table 1).
 2.2 : 1

가 (small-sized type)
 2)
 I 22.7% 가 ,
 IIc 35.6% 가
 (P=0.005). (I,
 IIa) 7 , (IIa+x, IIb, IIb+x, IIc, IIc+x, III) 15
 , 16 ,
 203 (Table 1).

1992 1999 8
 1,244 369

가 25 cm² (5×5 cm)
 3)
 ,
 12 (54.5%), 128 (58.4%) ,
 10 (45.5%),
 91 (41.6%)
 (P=0.724).
 1/3 가
 (P=0.493).
 45.6%
 가 32.4% 가
 (Table 1).

4)
 369 46 (12.5%)
 22 6 (27.3%),
 가 219 19 (8.7%) 가
 (P=0.006).
 22
 12 (54.5%) 1 (8.3%)
 1
 10 (45.5%) 5 (50%)
 가 1 3 (30%),
 2 2 (20%)

SPSS Windows 9.0
 chi-square test , Kaplan-Meier
 Log-Rank test
 , P<0.05

Table 1. Clinicopathologic features of the superficial spreading type and small-sized early gastric cancer

Variable	Superficial spreading type (%) n=22	Small-sized type (%) n=219	P-value
Gender			0.026
Male	10 (45.5%)	151 (68.9%)	
Female	12 (54.5%)	68 (31.1%)	
Location			0.493
Upper1/3	3 (13.6%)	16 (7.3%)	
Middle1/3	8 (36.4%)	72 (32.9%)	
Lower1/3	11 (50%)	131 (59.8%)	
Depth of invasion			0.724
Mucosa (M)	12 (54.5%)	128 (58.4%)	
Submucosa (SM)	10 (45.5%)	91 (41.6%)	
Macroscopic appearance			0.005
I	5 (22.7%)	8 (3.7%)	
IIa	2 (9.1%)	8 (3.7%)	
IIa+X	2 (9.1%)	7 (3.2%)	
IIb	2 (9.1%)	50 (22.8%)	
IIb+X	3 (13.6%)	26 (11.9%)	
IIc	3 (13.6%)	78 (35.6%)	
IIc+X	4 (18.2%)	34 (15.5%)	
III	1 (4.5%)	7 (3.2%)	
Histological type			0.87
Well differentiated	9 (40.9%)	75 (34.2%)	
Moderately differentiated	5 (22.7%)	68 (31.1%)	
Poorly differentiated	4 (18.2%)	38 (17.4%)	
Signet differentiated	4 (18.2%)	38 (17.4%)	
Lymph node metastasis			< 05
N0	16 (72.7%)	200 (91.3%)	
N1	4 (18.2%)	19 (8.7%)	
N2	2 (9.1%)	0	

I = protruded type; IIa = superficial elevated type; IIb = superficial flat type; IIc = superficial depressed type; III = excavated type; X = mixed type; N0 = no evidence of lymph node metastasis; N1 = metastasis to group 1 lymph nodes; N2 = metastasis to group 2 lymph nodes.

219 (58.4%), 128 (60%), 4 (13.2%), 75 (20.3%), 4 (10.3%), 2 (5.3%), 38 (10.3%), 6 (15.8%), 13 (1.1%), 2 (5.3%), 16 (12.5%), 203 (84%), 22 (8.4%), 7 (31.8%), 15 (68.2%), D1, 4 (18.2%), D2, 15 (68.2%), D3, 3 (13.6%), 5, 3

(Table 2).

219	30 (13.7%),	
189 (86.3%)	D1	(P=0.024)
55 (25.1%), D2	146 (66.7%), D3	(P=0.016).
18 (8.2%)		2 (9.1%),

Table 2. Characteristics of lymph node metastasis of the superficial spreading and small-sized types of early gastric cancers

Variable	Superficial spreading type n=6	Small-sized type n=19	P-value
Depth of invasion			0.006
Mucosa (M)	1	6	
N1	1	6	
N2	0	0	
Submucosa (SM)	5	13	
N1	3	13	
N2	2	0	
Macroscopic appearance			0.75
I	0	1	
IIa	0	1	
IIa+X	0	1	
IIb	2	3	
IIb+X	2	3	
IIc	0	4	
IIc+X	1	6	
III	1	0	
Histological type			0.85
Well differentiated	0	2	
Moderately differentiated	3	9	
Poorly differentiated	2	6	
Signet differentiated	1	2	

Table 3. Operative treatment of the superficial spreading and small-sized types of early gastric cancers

	Superficial spreading type (%) n=22		Small-sized type (%) n=219		P-value
	M	SM	M	SM	
Operation					0.024
Subtotal					
B-I	5	3	33	27	
B-II	3	4	75	54	
Total	4	3	20	10	
Lymph node dissection					0.016
D1	4	0	38	17	
D2	7	8	80	66	
D3	1	2	10	8	
Additional resection	2		3		

B-I = billroth I gastroduodenostomy; B-II = billroth II gastrojejunostomy; M = Mucosa; SM = Submucosa; D1 = dissection of group 1 lymph node; D2 = dissection of group 2 lymph nodes; D3 = dissection of group 3 lymph nodes.

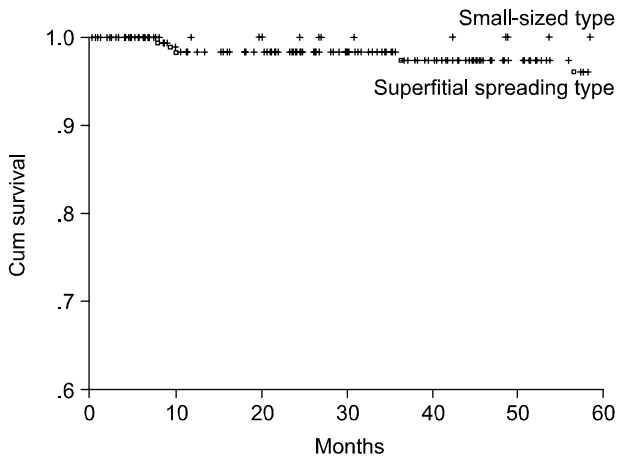


Fig. 1. 5-year survival rates of patients with superficial spreading and small-sized types of early gastric cancers.

3 (1.4%) 가
 20 (90.9%), 219 212 (96.8%)
 (Table 3).
 6) 5
 22 5 95.5%, 219
 5 97.3% 가
 (Fig. 1).

가 (8,14)
 가
 가 Stout(15)가 1942
 가 1973 Yasui (16) 가 25 cm² (5×5 cm)



가 가
 가 가
 가 D2 5 90%
 가 가
 N1, N2 D2
 가 가
 가

가
 .(17)
 가 ,(18)
 ,(19) 가 가
 ,(20)
 가
 가
 가 374
 가 41 (11%),
 46 (12.3%) 1
 가 4 (1.1%)
 2 27.3% 가 8.2%
 가 (P=0.006) 2
 2 (20%)
 80%
 (T1~T3) (T4)
 97%
 75%
 ,(21,22)
 가가 가

가

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