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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
                                              369
                                                                             22 (6%)
            가
                                              , 12
                                                            , 10
                                  가
                                                           , 128
                                               219 (59.3%)
                                                                            , 91
                      가
                                              1)
                                  가
                                                                     가 58.2 , 가 55 ,
                                    5 cm
                   ,(11)
                                                       가 55.7 , 가 56.9
                             (superficial sprea-
                                                                        1:1.2,
                      가
ding type)
                                              2.2 : 1
                                                                         (Table 1).
                              가
               가
                                              2)
                         (small-sized type)
                                                         I 22.7% 가,
                                             IIc 35.6% 가
                                                         (P=0.005).
                                                        (IIa+x, IIb, IIb+x, IIc, IIc+x, III) 15
                                             IIa) 7,
                                                                        16,
                     1992 1999
                                      8
                                             203
                   1,244
                                      369
                                                       (Table 1).
                                              3)
                        가 25 cm<sup>2</sup> (5×5 cm)
        ,(16)
                        2\times2 cm
                                                    12 (54.5%), 128 (58.4%) ,
       .(11)
                                                                           10 (45.5%),
I , II (IIa , IIb , IIc ), III
(12) (I, IIa) (IIa+X, IIb, IIb+X, IIc,
                                                    91 (41.6%)
                                                    (P=0.724).
IIc+X, III)
                                                                      가
                                                                 1/3
WHO
                                                                      (P=0.493).
                .(13)
 369
                                      219
                                                                                  45.6%
                             22
                                               가
                                                                           32.4% 가
                                                (Table 1).
                                                4)
                                                                    369 46 (12.5%)
                                                                   22 6 (27.3%),
                                                  219 19 (8.7%)
                          가
                                                                             가
                                                                          (P=0.006).
                                                     22
                                             12 (54.5%)
1
            SPSS Windows 9.0
                                                                    1 (8.3%)
                                             기 (45.5%
가 1
     chi-square test
                              Kaplan-Meier
                    Log-Rank test
                                                   10 (45.5%)
                                                                   5 (50%)
                                                                     3 (30%),
       , P<0.05
                                                                    2 (20%) .
                                              2
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Table 1.	Clinicopathologic	features of	the	superficial	spreading	type an	d small-sized	early	gastric	cance
Table 1.	CHIHCODamorogic	icatures or	unc	Supermenai	Spicaumg	type an	u siliali-sizcu	carry	gasuic	cance

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 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		D 1
	M	SM	M	SM	P-value
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	2	3	3	

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

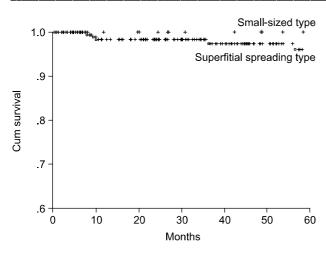


Fig. 1. 5-year survival rates of patients with superficial spreading and small-sized types of early gatric cancers.

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

가 가 가 가 D2 90% 가 가

N1, N2 D2

가 가

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

가 .(17)가

가 가 ,(19).(20)

,(18)

가

374 46 (12.3%) 가 41 (11%), 2 가 4 (1.1%) 가 27.3% 8.2% 가 가 (P=0.006)2 2 (20%)

> 80% (T1~T3) (T4) 97% 75% .(21,22) 가가 가

가

. Hioki (8) 가 4 cm 가 가 , Endo (23)가 5 cm (24)가 2 cm 가 가 가 가 가 가 10% 5 cm 가 가 가 가 가

, 가 가 ,

가 가 가 가 .

0.5% 가 가 가 9.1% 가 가

> 가 , 가 가

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