

(MALT Lymphoma)

**Clinical Analysis of MALT Lymphoma in the Stomach**

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**Purpose:** The aim of our study was to analyze the clinical and histopathological characteristics of mucosa associated lymphoid tissue (MALT) lymphoma in the stomach.

**Methods:** We retrospectively reviewed the medical records of 22 patients with pathologically proven MALT lymphoma from Jan. 1995 to Sep. 2000 in Samsung Medical Center. The factors analyzed were operative procedures, tumor stage and histopathological characteristics.

**Results:** Of 3658 patients with gastric malignancy, 22 (0.6%) patients, 7 men and 15 women from 25 to 70 years (mean, 48.8 years), were found to have MALT lymphoma. Fourteen cases (64%) were located in the antrum, 4 (18%) in the body and 4 (18%) in the fundus or the high body. Nineteen patients were managed with total gastrectomy and splenectomy, and 3 with radical subtotal gastrectomy. Histopathologically, the tumor was limited to the mucosa in 3 patients (13.6%), to the submucosa in 13 (59.1%), and extended to the muscularis propria in 6 (27.3%). The lymph node involvement was seen in 12 patients (54.6%). There were no cases of splenic, hepatic or bone marrow involvement. *H. pylori* was identified in 11 patients (50%). During the mean follow-up period of 32.7 months, there were no reports of tumor recurrence or death.

**Conclusion:** MALT lymphoma rarely disseminates at the time of diagnosis and rarely involves the bone marrow. Lymph node involvement, however, was relatively high. Total gastrectomy is effective in the management of patients with high grade MALT lymphoma and adjuvant chemotherapy is

effective in cases of metastasis. (J Korean Surg Soc 2002; 63:468-471)

**Key Words:** Mucosa associated lymphoid tissue (MALT) lymphoma, Stomach

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1983 Isaacson (I) MALT  
 H. pylori  
 MALT  
 H. pylori  
 가 MALT

1995 1 1 2000 9  
 30 MALT 22

22 7 15 1:  
 2.1 25 70

50  
 ☎ 135-710,

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48.8 (Table 1). 22 6 , 5 , 1  
 가 19 (86.0%), , 1 (Table 2).  
 (9.0%), 1 (4.5%)가 7 (31.9%), 15 (68.1%) (Table 2).  
 . 15 7 ,  
 가 8 , 7 가 5 가 .  
 1 가 . 3 58.4 43.9  
 (13.7%) 19 (86.3%) 가 7 5 (71.4%)  
 10 가 17  
 (Table 2). 16 (72.0%) 가  
 , 2 (18.0%)  
 . 6.8×5.0 cm .  
 14 (64.0%), 4 (18.0%)  
 4 (18.0%) (Table  
 2).  
 3 (13.6%), 13 (59.1%), 6  
 (27.3%) 12 (54.6%)

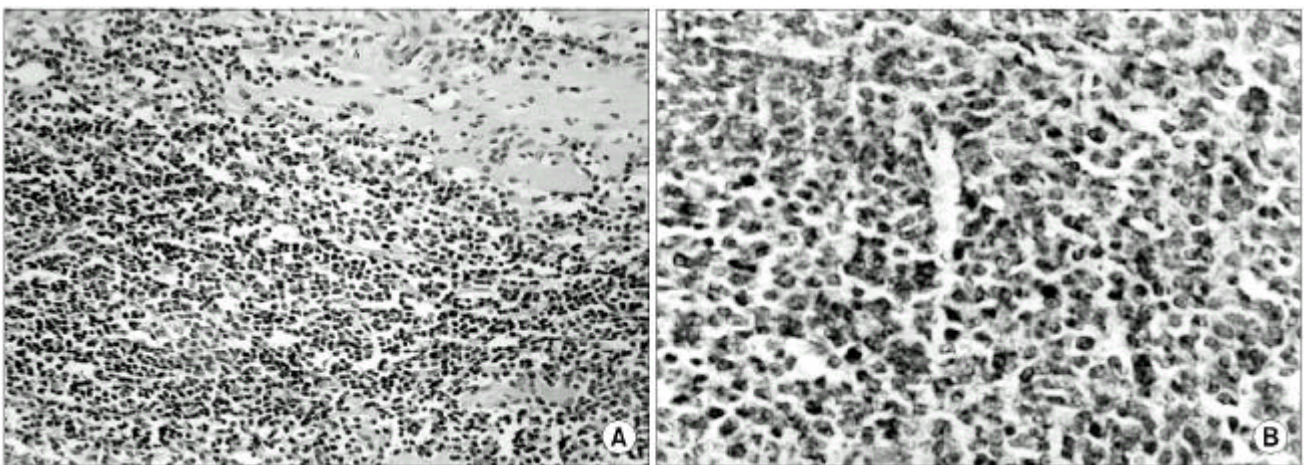
**Table 1.** Age and sex distribution of patients

Age	Sex (%)	
	M	F
20-29	1 (4.5)	2 (9.0)
30-39	0 (0.0)	1 (4.5)
40-49	3 (13.6)	5 (22.7)
50-59	1 (4.5)	3 (13.6)
60-69	1 (4.5)	3 (13.6)
70-79	0 (0.0)	1 (4.5)
Total	7 (31.9)	15 (68.1)

M : F = 1 : 2.1.

**Table 2.** Tumor characteristics

	No (%)
Location	
Fundus	4 (18.0)
Body	4 (18.0)
Antrum	14 (64.0)
Pathologic feature	
Tumor invasion	
Mucosa	3 (13.6)
Submucosa	13 (59.1)
Proper muscle	6 (27.3)
Lymph node metastasis	
Metastasis	12 (54.5)
No metastasis	10 (45.5)
Grade	
High grade	7 (31.9)
Low grade	15 (68.1)
Operation	
Subtotal gastrectomy	3 (13.7)
Total gastrectomy	19 (86.3)



**Fig. 1.** Microscopic findings of marginal-zone B cell lymphoma of MALT type. A) Low grade (H&E stain, ×100), B) High grade (H&E stain, ×200).

16 11 (68.7%) *H. pylori* MALT  
 가 12

1 62 32.7 (6)  
 MALT

(7) MALT  
 가

(primary extranodal) MALT  
 가 CT

(2) B MALT  
 T

Cogliatti (7) 5 91%, 10  
 75% MALT  
 가 (7)  
 1983 *H. pylori*

Isaacson (Mucosa Associated Lymphoid Tissue Lymphoma: MALT Lymphoma)  
 (1) MALT 90% *H. pylori*가  
 (8) *H. pylori* MALT *H.*  
*pylori*가

MALT가 MALT (3,4)  
 가

Sjögren's syndrome  
 MALT

MALT poulous (10) 가 (9) Economo-  
 50 가 가  
 70 가 가  
 가 15 : 1 가  
 가 가

Peyer's patch (2) 가 Peyer's patch (11)  
 (reactive follicle) 12.1%  
 32.7% 가

(centro-  
 cytes)

revised European American Lymphoma Classification  
 B (marginal zone B-cell lymphoma)  
 (5) 가 3  
 (plasma cell differentiation)  
 가 1 *H. pylori*

*H. pylori* B 1 (4.5%)가 *H. pylori* 22  
 가

pylori (12) H. 22 15 가 99 1999 7 3 , 4 가 H. pylori 가

MALT 22 48.8 3 (13.6%), 13 (59.1%), 6 (27.3%) 가 가 12 (54.5%) MALT 15 (68.1%), MALT 7 (31.9%) 가 MALT 가 MALT 가



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