

한국인에서 위상피하 종양의 유병률에 대한 연구: 단일기관 경험

이정훈, 이항락, 안영우, 이강녕, 전대원, 이오영, 한동수, 윤병철, 최호순

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Prevalence of Gastric Subepithelial Tumors in Korea: A Single Center Experience

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Background/Aims: The incidental finding of gastrointestinal subepithelial tumors (SETs) is increasing with national cancer screening endoscopy. In a Swedish population, screening endoscopy found a prevalence of SETs of 0.36%. However, the prevalence of gastric SETs in Korean patients has not been described. Therefore, this study evaluated the prevalence of SETs of the stomach in a Korean patient population.

Methods: We reviewed endoscopic reports of 11,712 subjects who underwent screening esophagogastroduodenoscopy (EGD) at Hanyang University Hospital between July 2012 and June 2013.

Results: Among 11,712 patients, 194 (1.7%) had SET of the stomach. Of these, 71 (prevalence, 0.6%) were male and 123 (prevalence, 1.1%) were female. When grouped by age, the prevalence of SET was as follows: 1.0% for patients in their twenties, 6.2% for those in their thirties, 19.1% for those in their forties, 33.0% for those in their fifties, 30.4% for those in their sixties, and 10.3% for those over 70 years of age.

Conclusions: The overall prevalence of gastric SET among healthy examinees was 1.7%. The prevalence of gastric SET increased with age and was higher in female. (**Korean J Gastroenterol 2015;66:274-276**)

Key Words: Gastrointestinal stromal tumors; Prevalence; Gastrointestinal endoscopy

INTRODUCTION

Upper gastrointestinal (UGI) subepithelial tumors (SETs) are frequently encountered during esophagogastroduodenoscopy (EGD) or radiologic examinations. They are covered by normal overlying mucosa, usually asymptomatic and small, and often clinically insignificant. However, SETs do have malignant potential. As high-resolution endoscopy becomes more available, SETs arising in the UGI tract are more often identified. In a study of 15,104 Swedish patients under-

going routine upper endoscopy, the prevalence of gastric SETs was reported at 0.36%.¹ However, the prevalence of gastric SETs in Korean patients has not been described. It seems likely that the rate of detection of asymptomatic gastric SETs has increased in South Korea as the number of individuals undergoing upper endoscopy during health screening has increased.² Therefore, the purpose of this study is to evaluate the prevalence and characteristics of UGI SETs at our institution.

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SUBJECTS AND METHODS

We reviewed endoscopic reports of 11,712 subjects who underwent screening EGD for routine screen on annual exam at Hanyang University Hospital (Seoul, Korea) between July 2012 and June 2013. Patients who underwent surgical or endoscopic resection due to gastric tumor were excluded. SET was defined as an elevated lesion covered with normal-appearing mucosa, not lost by changes in posture. EGDs were performed by 11 certified endoscopists. All procedures were performed on an outpatient basis with a standard upper endoscope (GF-260; Olympus, Tokyo, Japan). The ethics committee of Hanyang University Hospital approved the study protocol (IRB No. HYUH 2014-11-007). Informed con-

sent was obtained from each participant before data collection.

RESULTS

Among 11,712 health examinees, 194 (1.7%) had gastric SET. The SET prevalence by gender was male, 71 (0.6%), and female 123 (1.1%), significantly higher in females than males ($p=0.003$). The average age of examinees with SET was 56.4 years (males, 56.9 years; females, 56.1 years). The prevalence by age group was as follows: 0.6% of patients in their twenties, 0.7% of those in their thirties, 1.1% of those in their forties, 1.8% of those in their fifties, 3.0% of those in their sixties, and 2.4% of those greater than 70 years of age (Fig. 1). There was a correlation between age and the prevalence of gastric SET ($r=0.265$, $p=0.027$) (Fig. 2). SET grouped by size ranged from 146 (75.3%) were < 10 mm, 37 (19.1%) were 10-19 mm, 4 (2.1%) were 20-29 mm, and 7 (3.6%) were ≥ 30 mm (Fig. 3). Grouped by location, 36 (18.6%) were in

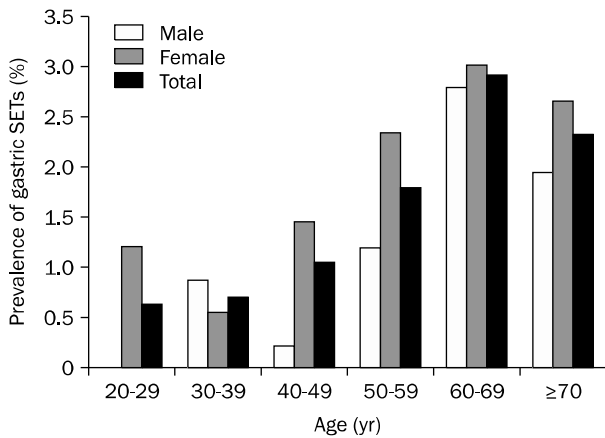


Fig. 1. The prevalence of gastric subepithelial tumors (SETs) by age and sex. Mean prevalence according to age group: 20-29 years, 0.6%; 30-39 years, 0.7%; 40-49 years, 1.1%; 50-59 years, 1.8%; 60-69 years, 3.0%; ≥ 70 years, 2.4%.

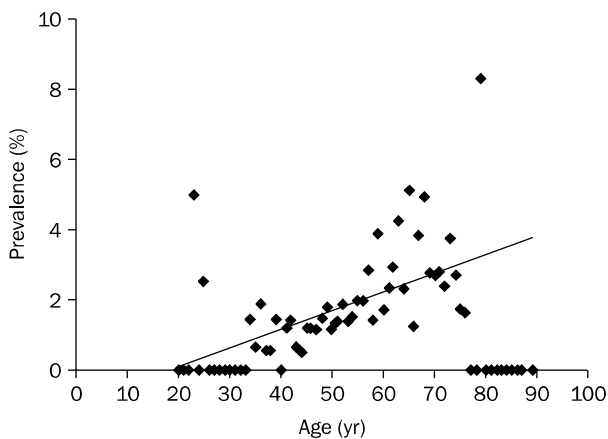


Fig. 2. Correlation between age and prevalence of gastric subepithelial tumors (by Pearson's correlation coefficient).

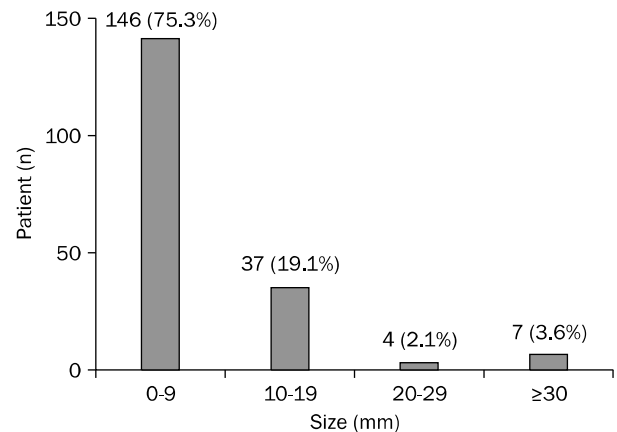


Fig. 3. Classification by size of gastric subepithelial tumors.

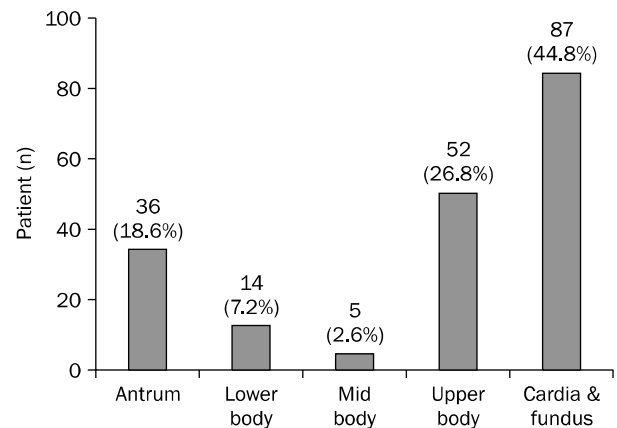


Fig. 4. Classification by location of gastric subepithelial tumors.

Table 1. Anatomic Location, Age and Size by Gender

	Male (n=71)	Female (n=123)	p-value
Location			0.3585
Fundus	24 (36.4)	42 (63.6)	
Cardia	9 (40.9)	13 (59.1)	
Upper body	22 (42.3)	30 (57.7)	
Mid body	3 (60.0)	2 (40.0)	
Lower body	2 (14.3)	13 (85.7)	
Antrum	11 (31.4)	24 (68.6)	
Age (yr)	56.92±10.88	56.16±10.86	0.1633
Size (mm)	7.69±7.01	7.45±5.83	0.7956

Values are presented as n (%) or mean±SD.

the antrum, 14 (7.2%) were in the lower body, 5 (2.6%) were in the mid-body, 52 (26.8%) were in the upper body, and 87 (44.8%) were in the cardia or fundus (Fig. 4). There was no significant difference in location, age or size between the male and female (Table 1).

DISCUSSION

The term subepithelial lesion refers to a mass or bulge covered by normal-appearing mucosa identified during standard endoscopy. Gastric SETs, including GISTs, are common in the UGI tract and often are detected incidentally during routine endoscopy. These include lipomas, vascular structures, cysts, pancreatic rests, extramural structures, and neoplastic lesions.³ Although the majority of SETs are considered benign, some do have malignant potential.^{4,5}

In the present study, the prevalence of gastric SETs was 1.7%, and that increased with age. In Korea, the national healthcare program recommends gastroscopy every two years irrespective of the presence of symptoms. As a result, SETs arising in the UGI tract are being increasingly identified. Therefore, our results provide objective data beyond previous studies. Although the mean prevalence of gastric SETs was 1.7%, the prevalence increased with age to 3.0% in patients in their sixties. This suggests that gastric SETs are not

rare, and therefore an appropriate evaluation and management plan should be determined.

Another important result of our study was that the prevalence of gastric SET was higher in female than in male. While we still do not know the exact cause of gastrointestinal SETs, it is possible that hormonal effects or autoimmune effects may contribute to their development, especially in cases of GIST or leiomyoma.

There are several limitations of this study. First, we did not perform EUS in the entire study population. As a result, we cannot rule out extrinsic compression or gastric folds. Second, although certified endoscopists performed the procedures, there could be some differences in the diagnosis of SETs between endoscopists. However, to our knowledge, this is one of the largest studies of its kind in an Asian population.

In conclusion, our data suggest that gastric SETs are not uncommon lesions that may be encountered during screening endoscopy. Therefore, an objective management guideline should be introduced in the future for patients with gastric SETs.

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