

## Upper Endoscopic Finding in Dyspeptic Patients at Srinagarind Hospital

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### ABSTRACT

**Objective:** To determine the results of upper endoscopic finding in dyspeptic patients at Srinagarind Hospital and correlation between the age and upper endoscopic finding.

**Material and Method:** Retrospective study of data record form of upper endoscopic examination in simple dyspeptic patients at Srinagarind Hospital during June 2001 to September 2006. All data record forms were reviewed in age, sex and upper endoscopic finding.

**Results:** A total of 1,293 upper endoscopic examination were performed and the upper endoscopic finding consisted with non-ulcer dyspepsia (82.21%), peptic ulcer (10.90%), gastric cancer (2.86%) and others (4.04%).

**Conclusion:** This study showed non-ulcer dyspepsia was the most common upper endoscopic finding in simple dyspeptic patients while gastric cancer was uncommon but it should be considered in old aged group.

**Key words :** Non-ulcer dyspepsia, Gastric cancer

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Dyspepsia is defined as symptom of pain or discomfort centered in the upper abdomen, which is a common clinical presentation for seeking health care worldwide.<sup>(1,2)</sup> These symptoms may be associated with a wide range of specific clinical diagnoses such as peptic ulcer diseases, gastric cancer, esophagitis, symptomatic biliary stone, liver cancer and often no organic cause can be found<sup>(3,4)</sup> (functional dyspepsia). In clinical practice, provisional diagnoses based on

history and physical examination alone are often inaccurate, leading to inappropriate management plans and/or a delay in establishing the correct diagnosis and treatment<sup>(5)</sup>. Upper endoscopic examination is the "gold standard" for establishing diagnosis definite causes of dyspepsia, but this procedure can't done for all dyspeptic patients due to many factors. Guidelines for the management of dyspepsia are recommended performing upper endoscopic examination in dyspeptic patients

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with "alarm symptom" such as significant weight loss, anemia, gastrointestinal bleeding or dysphagia.<sup>(6-8)</sup> Studies in whites demonstrated that gastric cancer is rare in patients less than 55 years of age in the absence of alarm symptoms.<sup>(9,10)</sup> Which more than 5% of gastric cancer cases would be missed in Taiwan if upper endoscopy was omitted in simple dyspeptic patients who were aged less than 45 years old.<sup>(11)</sup> The recommended age threshold for upper endoscopy also differs among different regions in Asia.<sup>(4,12)</sup> The First Asia Pacific Working Party on Functional Dyspepsia recommends endoscopy in the evaluation of patient with dyspepsia in the age range of 35 to 55 years depending on the local prevalence of gastric cancer.<sup>(7)</sup> However, data on the prevalence of gastric cancer and other causes on the use of upper endoscopy in simple dyspeptic patients in this area is unknown.

The purpose of the present study was to determine the frequency of significant diseases diagnosed by upper endoscopy in patients presenting with simple dyspepsia with various age group at Srinagarind Hospital, Northeastern of Thailand.

## MATERIAL AND METHOD

### Setting and patient enrollment

All data record forms of patients who underwent upper endoscopy because of dyspepsia during January 2001 to September 2006 at Endoscopic Unit, Department of Medicine, Srinagarind Hospital, Northeastern of Thailand were studied. The patient's population consisted mainly of outpatients of Srinagarind Hospital where an endoscopy service by gastroenterologist. Dyspepsia was defined as pain or discomfort centered in the upper abdomen. Inclusion criteria included all adult patients who present with the chief complaint of dyspepsia and underwent upper endoscopy for diagnoses the causes of dyspepsia. Exclusion criteria were dyspeptic patients with evidence of overt gastrointestinal bleeding such as hematemesis, melena or anemia. The diagnosis of gastric cancer or other malignancy was confirmed by histopathology. The protocol of the present study was approved by the institutional ethics committee.

### Statistical analysis

Number of patients and occurrence of upper endoscopic finding according to age and gender were calculated. The statistical analysis were performed and

reported as mean, range and percentage.

## RESULTS

A total of 1,293 upper endoscopic examinations were performed during the period of stud, 577 (44.62%) is male and 716 (55.38%) is female who presented with dyspepsia. The mean age was  $45.44 \pm 13.53$  years (15 to 88 years). The upper endoscopic finding was established as gastritis or duodenitis, normal finding, peptic ulcer, esophagitis, gastric cancer, gastric polyp and esophageal cancer in 65.97%, 16.24%, 10.90%, 3.4%, 2.86%, 0.46% and 0.15%, respectively (Table 1). Relative frequencies of upper endoscopic finding stratified by age and gender are presented in Table 2. The cumulative age frequency distribution for gastric cancer is presented in Table 3.

## DISCUSSION

The present study demonstrated that dyspepsia was found in both gender but female slightly more common than male. The age distribution from 15 to 88 years old and common in middle aged group in both gender. The upper endoscopic finding were vary from normal gastric and duodenal mucosa to serious histopathology such as gastric cancer. The most common upper endoscopic finding was gastritis or duodenitis in 65.97%, while normal gastric and duodenal mucosa were found in 16.24%, which both classified as functional or non-ulcer dyspepsia. The organic causes of dyspepsia from upper endoscopic finding were peptic ulcers, esophagitis, gastric cancer, gastric polyp and esophageal cancer in 10.90%, 3.40%, 2.86%, 0.46% and 0.15%, respectively. From the previous reported the most common upper endoscopic finding in dys-

**Table 1.** The upper endoscopic finding in dyspeptic patients.

Finding	Number (Male:Female)	Percent (%)
Gastritis, duodenitis	853 (383:470)	65.97
Normal finding	210 (74:136)	16.24
Peptic ulcer	141 (80:61)	10.90
Esophagitis	44 (22:22)	3.40
CA stomach	37 (12:25)	2.86
Gastric polyp	6 (5:1)	0.46
CA esophagus	2 (1:1)	0.15

**Table 2.** Relative frequencies of upper endoscopic finding stratified by age and gender.

Age	Finding												
	Gastritis, Duodenitis, Normal		Peptic ulcer		Esophagitis		Gastric cancer		Esophageal cancer		Gastric polyp		
	M	F	M	F	M	F	M	F	M	F	M	F	
≤ 20	11	17	1	0	3	1	0	0	0	0	0	0	0
21 - 25	20	29	3	1	1	0	0	0	0	0	0	0	0
26 - 30	33	45	4	6	2	2	0	0	0	0	0	0	0
31 - 35	48	75	2	4	3	5	0	1	0	0	0	0	0
36 - 40	79	86	4	7	4	3	0	1	0	0	0	0	0
41 - 45	61	88	14	3	0	2	3	4	1	0	0	0	0
46 - 50	64	80	9	11	5	6	1	2	0	0	0	0	0
51 - 55	52	64	11	10	0	1	2	2	0	0	0	0	0
56 - 60	29	53	12	4	2	1	0	4	0	0	2	1	
61 - 65	29	30	10	6	0	1	1	2	0	0	1	0	
66 - 70	14	19	4	8	0	0	4	3	0	1	0	0	
≥ 71	17	20	6	1	2	0	1	6	0	0	2	0	
<b>Total</b>	<b>457</b>	<b>606</b>	<b>80</b>	<b>61</b>	<b>22</b>	<b>22</b>	<b>12</b>	<b>25</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>1</b>	

**Table 3.** Cumulative age frequency distribution for gastric cancer.

No.	Age							
	≤ 30	< 35	< 40	< 45	< 50	< 55	< 60	≥ 65
No. endoscopic procedure	179	317	501	677	855	997	1105	1185
No. case of gastric cancer	0	1	2	9	12	16	20	23
Gastric cancer per 1,000 endoscopic procedure	0	3.15	3.99	13.29	14.03	16.05	18.10	19.41

peptic patients was gastritis, duodenitis and normal gastroduodenal mucosa in 55% while peptic ulcer was found in 27%<sup>(13)</sup>, which functional or non-ulcer dyspepsia was common finding in dyspeptic patient without alarm feature such as evidence of overt gastrointestinal bleeding. In this study peptic ulcer was decreased while non-ulcer dyspepsia was increased from the previous reported may be due to treatment with *Helicobacter pylori* eradication and widely used of proton pump inhibitor in dyspeptic patients. Gastric cancer was found in 2.86% and it was the most serious cause of dyspepsia because of its worse prognosis especially in advance case.

The relative frequencies of upper endoscopic finding stratified by age and gender demonstrated that non-ulcer dyspepsia and peptic ulcer were common in all age groups and both gender but gastric cancer was found in older age groups in both gender. The cumu-

lative age frequency distribution for gastric cancer showed that gastric cancer was not found in dyspeptic patient younger than 30 years old but gastric cancer was found in 3.15, 3.99, 13.29, 14.03, 16.05, 18.10 and 19.41 cases per 1,000 endoscopies procedure in dyspeptic patients younger than 35, 40, 45, 50, 55, 60 and 65 years old, respectively. This data showed that gastric cancer cases would be missed if upper endoscopy was omitted in simple dyspeptic who were aged less than 35 years old in 3.15 cases per 1,000 cases of simple dyspeptic patients and increase incidence in older age.

In summary the present study demonstrated that non-ulcer dyspepsia was the most common upper endoscopic finding in simple dyspeptic patient at Srinagarind Hospital. However, gastric cancer was found in 2.86% of simple dyspeptic patients and increase incidence in older age patient.

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