Upper Gastrointestinal Malignancy among Dyspepsia Patients in Cipto Mangunkusumo Hospital Jakarta

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ABSTRACT

***Background**: Upper gastrointestinal (GI) malignancy was still a health problem in all over the world. The prevalence of the upper GI malignancy vary among Asian countries. Data from Indonesia was scarcely reported. The aim of this study is to determine the frequency of upper GI malignancy among dyspepsia patients who underwent esophagoduodenoscopy (EGD) procedure.*

***Method**: This is a retrospectives study from patient with dyspepsia that had underwent upper GI endoscopy at the Department of Internal Medicine Cipto Mangunkusumo hospital from January 2005 to December 2007. All complete data from medical report and histopathology appearance will be recorded.*

***Results**: Out of 2,116 patients underwent endoscopy due to dyspepsia, 110 (5.20%) patients was diagnosed as cancer. This upper GI malignancy consisted of gastric cancer in 63 (2.98%) cases, esophageal cancer 32 (1.51%) and duodenal cancer 15 (0.71%). The mean ages of the patients was 53.36 ± 10.97 years, age less than 45 years was 20 (18.18%) patients, more than 45 years was 90 (81.82%), male 71 (64.55%) patients. Most of them had alarm signs 96 (87.27%). Histopathology finding showed adenocarcinoma in 75 (68.18%) cases, signet ring cell carcinoma in 14 (12.73%), squamous cell carcinoma in 8 (7.27%), others in 13 (11.82%). Out of 59 gastric cancer, 48 (76.19%) cases was located at distal part while the rest 11 (17.46%) cases was located at the proximal gaster, and 4 (6.35%) in diffuse. By the ethnics founded Javanese 37 (33.64%) patients, Betawinese 22 (20.00%), Batak 13 (11.82%) and Sundanese 12 (10.91%).*

***Conclusions**: Upper GI malignancy was found in five percent of patients with dyspepsia who undergo colonoscopy. The three most frequent malignancies were gastric carcinoma, esophageal carcinoma, and duodenal carcinoma respectively. Most of gastric adenocarcinoma was located at distal stomach.*

***Keywords**: upper gastrointestinal malignancy, dyspepsia, endoscopy, alarm sign, histopathology*

INTRODUCTION

Dyspepsia is defined as pain or discomfort centered in the upper abdomen.[1,2] An organic cause of dyspepsia is found in 20-60% of cases depending on population being studied.[3] Upper gastrointestinal (GI) malignancies are rare, reported in < 2% of patients in most endoscopic studies, and 1-2% of patients with dyspepsia.[3,4] In England and Wales upper GI malignancy is 7% from entire cancer diagnosed and 9% death cause of cancer.[4] By the end of 20th century there is a tend of degradation incidence and mortality gastric cancer in world, but still be confessed by as second death cause after pulmonary cancer and estimated more than 870,000 death caused by this disease in the year 2,000, coming near 12% from all death cause of cancer.[5]

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Gastric cancer also still common represent as malignancy in the far East. Incidence reported 5-10 case per 100,000 people, vary among Asian State and ethnic.[6] Hong Kong cancer reported incidence of gastric cancer 24 per 100,000 resident with about 10% age less than 45 years.[6] Gadour et al from King Fahat Central hospital Saudi Arabia reported 2.40% cases of upper GI malignancy from 2,572 patients underwent endoscopy.[7] In the United States and European country, gastric carcinoma is usually diagnosed at advanced stage and the incidence of early gaster only 16% of gastric cancer, whereas in Japan it now approaches 60%.[8] Patient with GI malignancy, 60-96% have an alarm sign, like heavy degradation of bodyweight, hematemesis melena, anemia and non-stopped vomitting.[9,10,11,12] The American Gastro-enterological Association recommendation and common clinical practice is to perform endoscopy on patients with dyspepsia and "alarm" symptoms or over the age of 45 or more. Younger patients without alarm symptoms can be treated empirically. Endoscopy was reserved for whom symptom fail to resolve.[13] Limitation number of paper in United Kingdom because of seldom upper GI malignancy at this age group.[14]

The aim of this study is determine the frequency of upper GI malignancy in patient with dyspepsia and its distribution according to age, sex, alarm sign, and ethnics.

METHOD

This study is a retrospective descriptive study from endoscopy record from patient with dyspepsia. All patient underwent upper GI endoscopy in the Division of Gastroenterology Department of Internal Medicine, Cipto Mangunkusumo hospital, from January 2005 until December 2007. Medical records of upper GI malignancy patients diagnosed by esophagogastro-duodenoscopy (EGD) dissociated, and then data were descriptive by age, gender, ethnics, clinical symptom and laboratory result. Result of histopathologic appearance got from Department of Anatomical Pathology Cipto Mangunkusumo hospital, also evaluation of location gastric tumor according to EGD.

RESULTS

From January 2005 until December 2007, of 2,116 patients with dyspepsia have been undergone upper GI endoscopy and 110 patients (5.20%) revealed upper GI malignancy.

According to Indonesian ethnics, the frequent was Javanese 37 (33.64%) followed by Betawinese 22 (20.00%) and Sundanese 12 (10.91%). While outside Javanese is Batak 13 (11.82%), Chinese and Lampung each 4 (3.64%), and others under of them (table 5).

Table 1. Distribution of upper gastrointestinal malignancy according to location

Location	n (%)
Gaster	63 (2.98)
Esophagus	32 (1.51)
Duodenum	15 (0.71)
Total	**110 (5.20)**

Table 2. Characteristic of subject with upper gastrointestinal malignancy

Characteristic	n (%)
Sex	
Male	71 (64.55)
Female	39 (35.45)
Age, mean ± SD (years old)	53.36 ± 10.97
< 45	20 (18.18)
≥ 45	90 (81.82)
Alarm sign	
Yes	96 (87.27)
No	14 (12.73)

Table 3. Site of gastric carcinoma

Location	n (%)
Cardia and fundus	11 (17.46)
Corpus and anthrum	48 (76.19)
Cardia, fundus, corpus, and anthrum	4 (6.35)
Total	**63 (100)**

Table 4. Histopathology appearance of upper gastrointestinal malignancy

Carcinoma	n (%)
Adenocarcinoma	75 (68.18)
Squamous cell carcinoma	8 (7.27)
Signet ring cell carcinoma	14 (12.73)
Others	13 (11.82)
Total	**110 (100)**

Table 5. Ethnic distribution of upper GI malignancy

Ethnic	n (%)
Javanese	37 (33.64)
Betawinese	22 (20.00)
Batak	13 (11.82)
Sundanese	12 (10.91)
Chinese	4 (3.64)
Lampung	4 (3.64)
Minangkabau	3 (2.73)
Acehnese	2 (1.82)
Makassarese	2 (1.82)
Manado	2 (1.82)
Palembang	2 (1.82)
Other	7 (6.36)
Total	**110 (100)**

DISCUSSION

Upper GI malignancy is still representing as health problem in world community. Existing data of every state differ either in Europe or Asia. Indonesia itself has a little report of this case. Upper GI malignancy is rare, reported in < 2% of patients in most endoscopic studies, and 1-2% of patients with dyspepsia.[3] Sundaneser et al from United Kingdom reported from

11,145 patients uncomplicated dyspepsia conducted by gastroscopy got 228 (2.0%) patient upper GI malignancy.[4] Lower incidence reported from Hongkong by Sung et al that is 23 (0.90%) from 2,627 patient dyspepsia.[6] Gadour et al reported from 2,572 patient dyspepsia which is endoscopy got 63 (2.40%) patient with upper GI malignancy.[7] Lowest result reported from Finlandia that is only 72 (0.70%) from 10,061 patient dyspepsia.[12] Bowrey et al from United Kingdom get 123 (3.00%) upper GI malignancy from 4,018 patient dyspepsia.[15] In this study, the result is 5.20% upper GI malignancy from 2,116 patient dyspepsia conducted by endoscopy and higher from other countries. The possible cause may be Cipto Mangunkusumo hospital represent as national referral hospital, patients come from other hospital even also from outside Java Island, like Sumatra, Kalimantan, Sulawesi, etc. But at least, the result has to become attention. The distribution of upper GI malignancy in patients with dyspepsia is gastric cancer 2.98%, esophageal cancer 1.51% and duodenal cancer 0.71% and if compared from 110 of patients with upper GI malignancy the frequency was 57.27%, 29.09% and 13.64% respectively. The result of this study is higher compared to research in Singapore and Saudi Arabia where got gastric cancer 0.47% and 0.91%, esophageal cancer 0.06% and 1.49%. But interesting here is Saudi Arabia result esophageal cancer is higher than gastric cancer.[1,7]

The mean age of this study is 53.36 ± 10.57 years, the youngest is 22 years and the eldest 81 years, male 64.55%, woman 35.45%. This is not different from Gillen et al from West Glasgow hospital, United Kingdom.[14] According to age threshold the result is 20 (18.18%) less than 45 years and 90 (81.82%) more than 45 years, as recommended by The American Gastroenterological Association if the patients more than 45 years have a first symptoms of dyspepsia must be go on endoscopic procedure.[3] In the age group, the highest is in 45-60 years group 59 patients (53.64%), while in the group 40-49, 50-59 and > 60 years is 27.30%, 34.50% and 28.20% respectively. The result is lower than reported by Sundanese et al from Uandough hospital, United Kingdom that is 99.00% above age 45 year. Dyspepsia patients with alarm sign have found in 96 (87.27%) patients, alarm sign in this study including decrease of bodyweight, melena, hematemesis, anemia and dysphagia. Other study from reported 83.00% upper GI malignancy with alarm sign, and in Finlandia get 93%.[6,16] Maconi et al report from 92 gastric cancer with age less than 45 years had 54 (58.70%) of uncomplicated dyspepsia and 38 (41.3%) with alarm sign.[17] By the site of gastric carcinoma, the result is 48 (76.19%) at lower gaster, 11 (17.46%) upper gaster and 4 (6.35%) diffuse. Other study get 72.10% lower gaster, 26.40% upper gaster, 2.50% linitis plastica, age above 55 years had a lot of in anthrum and corpus.[14,18]

By histopathology appearance, this study got 75 (68.18%) adenocarcinoma, 8 (7.27%) squamous cell, 14 (12.70%) signet ring cell, and 13 (11.82%) others (including GIST, lymphoma and mesenchymal carcinoma). This result is much the same reported in references, that is almost 90.00% gastric carcinoma is adenocarcinoma, while lymphoma and leiomyosarcoma at most 10.00%.[5] Canga et al get from 341 upper GI malignancy had 40% adenocarcinoma gaster, following by 32.00% adenocarcinoma esophageal, 26.00% squamous cell carcinoma and 2.00%.[3]

According to Indonesian ethnics, this study observed that the highest is in Javanese following by Betawinese and Sundanese. The possible cause is Javanese ethnic representing the majority of Indonesian people. The very interesting in here that Bataknese, ethnic outside Java Island, has the same result with Sundanese, while the procedure had taken outside Batak's area. This may be necessary the further study in other center.

CONCLUSION

Upper gastrointestinal malignancy found in five percents of dyspepsia patients with distribution gastric carcinoma, esophageal carcinoma, and duodenal carcinoma respectively. Most of them were gastric carcinoma in the lower gaster with adenocarcinoma.

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