The Profile of Hospitalized Patients with Esophageal Cancer at Dr. Cipto Mangunkusumo General National Hospital in 2002-2008

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ABSTRACT

Background: *Esophageal cancer is a rare but fatal disease. Neither data nor patterns of the disease have been published in Indonesia. Therefore, we aim to identify the profiles of patients with esophageal cancer who were hospitalized at Cipto Mangunkusumo hospital. The objective of our study was to recognize the prevalence of esophageal cancer, characteristics of the disease, diagnostic procedures and the treatment.*

Method: *This was a retrospective study. The data was obtained from medical records of patients with esophageal cancer who were hospitalized at Cipto Mangunkusumo hospital from 2002 to 2008.*

Results: *Twenty three patients, 13 males, were diagnoses with esophageal cancer during 2002–2008. All diagnoses were confirmed by histological examinations. Almost all patients were anemic at first presentation, but hipoalbuminemia were observed only in three patients. CT scan examination was more superior to chest X-ray and abdominal ultrasonography on detecting distant metastasis. Esophageal mass at 1/3 proximal of esophagus was found in four patients during endoscopic examination; while seven patients had esophageal mass located at 1/3 mid-portion of esophagus and 12 patients had esophageal mass located at 1/3 distal of the esophagus. Histological findings showed that 11 patients had adeno-carcinomas, eight patients had squamous cell carcinomas, three patients had squamous-adenocarcinomas and a patient was suspected to have sarcoma. Therapeutic measures had been done for 10 patients including gastrostomia in six patients, gastroesophageal resection in two patients and two patients received chemotherapy.*

Conclusion: *We found that adenocarcinomas is more common than squamous-cell carcinomas among patients with esophageal cancer. Almost all esophageal cancer patients came to the hospital in late stage.*

Keywords: *esophageal cancer, adenocarcinomas, squamous-cell carcinomas, squamous-adenocarcinomas, sarcomas*

INTRODUCTION

Esophageal cancinoma is a fatal disease. It is the 7th commonest cause of death due to malignancy in United States. Each year there are approximately 16,000 new patients and more than 14,000 death presumably because of it.[1] There are no data concerning esophageal carcinoma prevalence and disease pattern in Indonesia. Moreover, several aspects are still unknown including the influencing factors of this disease, and the possible ways to prevent the disease.

Therefore, we would like to conduct a study which may describe the profile of hospitalized patients with esophageal cancer. The profile included patient distribution according to gender, age group, symptoms and sign, diagnostic procedures and treatments of hospitalized patients with esophageal cancer at Cipto Mangunkusumo hospital.

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METHOD

This was a retrospective study. The data was obtained from medical records of patients with

esophageal cancer who were hospitalized at Cipto Mangunkusumo hospital from 2002 to 2008. The diagnosis of esophageal cancer was based on the histopatological examination result.

The reviewed data were: (1) patients' identity such as name, age, sex; (2) clinical manifestations including chief complaint, related symptoms, and findings on physical examination; (3) diagnostic procedures including laboratory test, chest X-ray, abdominal ultrasonography (USG), computed tomography (CT) scan, upper gastrointestinal tract endoscopy, histopathological examination on tissue obtained from biopsy during endoscopy; (4) the treatment or management of disease.

RESULTS

There were 23 hospitalized patients with esophageal cancer at Cipto Mangunkusumo hospital during years 2002-2008, 13 males and 10 females. The age of patients ranged from 35 to 80 years old. The age of male patients ranged from 35 to 72 years old, while the age of females patients ranged from 44 to 80 years old.

The most common symptom experienced by all patients was difficulty in swallowing or dysphagia, which was followed by food regurgitation after eating in 8 (35%) patients. Substansial weight loss was the third most common complaint found in 7 (30%) patients. There were 2 (9%) patients with melena and 2 (9%) patient had cought, difficult breathing and hoarseness (stridor). Heavy smokers (more than 20 cigarettes per day) were found in four patients and all of them were males.

Table 1. Classification based on age groups and sex

Sex	Frequency	Age groups
Male	13	35-72
Female	10	44-80

The diagnostic procedures were performed, such as laboratory test, chest X-ray, abdominal USG, chest and abdominal CT scan, upper gastrointestinal tract endoscopy (esophagogastroduodenoscopy) and histopathological examination on tissue biopsy obtained from endoscopy. Generally, almost all patients came with anemic condition (hemoglobin < 12 g/dL), and only one patient presented with hemoglobin more than 12 g/dL. Hypoalbuminemia (serum albumin level < 3 g/dL) was found on three patients. Among patients who underwent the chest X-ray, there was one patient who had pleural thickening, two patients had Koch pulmonum (KP) appearance, one patient had bronkopneumonia and another patient was suspected to have lung metastasis. Barium imaging was performed to three patients, all showing esophageal stricture.

Table 2. Patient symptoms

Symptoms	Frequency	Percentage (%)
Dysphagia	23	100
Vomitus	8	35
Weight loss	7	30
Melena	2	9
Cough-difficult to breath	2	9

Table 3. Laboratory examinations

Parameter	Frequency
Hemoglobin (g/dL)	
< 12	22
> 12	1
Albumin (g/dL)	
< 3	3
> 3	20

Abdominal USG examination revealed two patients with liver cirrhosis and ascites without metastatic lession; one patient had metastasis; one patient has para-aortal lymph node enlargement without metastasis appearance in intraabdominal organs; one patient has extrahepatic intraabdominal mass; and there are no abnormalities found on remainder. CT scan was performed on 11 patients and metastasis was demonstrated on five of them.

Table 4. The results of chest X-ray, USG, CT scan and histopathological examination

Examination	Frequency
Chest X-ray	
Old Koch pulmonum	2
Pleural thickening	1
Bronchopneumonia	1
Lung metastasis	1
Abnormalities not found	18
USG	
Cirrhosis and ascites without metastasis appearance	2
Liver metastasis	1
Paraaortal lymph nodes enlargement	1
Extrahepatic intraabdominal mass	1
No USG abnormalities	18
CT scan	
With metastasis appearance	5
Without metastasis appearance	6
Anatomical pathology	
Squamous cell carcinoma	8
Adenocarcinomas	11
Squamous-adenocarcinoma	3
Pleomorphic sarcomas	1

Endoscopy was performed for all patients.on 18 patients, the endoscopy is performed on Division of Gastroenterology Department of Internal Medicine. Two patients underwent esophagoscopy at Department of Otolaryngology Cipto Mangunkusumo

Table 5. The location of esophageal tumor

Tumor location	Anatomical pathology results			
	SCC	AC	SAC	Sarcoma
1/3 upper part	-	3	1	-
1/3 middle part	2	4	-	1
1/3 lower part	9	1	2	-
Total	11	8	3	1

hospital. In addition, three patients underwent endoscopy at the referring hospitals (one patient from Dharmais hospital, another patient from Tarakan hospital,and the other patient from Bandar Lampung hospital). All patients underwent biopsy and the diagnoses were confirmed by an anatomical pathologist.

The result of histopathological examination showed that 11 patients had adenocarcinomas; eight patients had squamous cell carcinoma; three patients had mixed type (squamous-adenocarcinoma); and one patient has undifferentiated result, presumed as pleomorphic sarcomas.

There were 23 patients, who were than classified according to the location of the tumor. Four patients had tumor located at 1/3 proximal of esophagus, with biopsy result of three patients had squamous cell carcinoma and one patient had squamous-adenocarcinoma. Seven patients had tumor at 1/3 middle of esophagus, with biopsy result of; four patients had squamous cell carcinomas; two patients had adenocarcinoma; and one patient had pleomorfic sarcoma. The last 12 patients had tumor at 1/3 distal of esophagus, with biopsy result of nine patients had adenocarcinoma; one patient had squamous cell carcinoma, and two patients had squamous-adenocarcinoma.

Terapeutic measures were performed in 10 patients, including gastrotomia for six patients, gastro-esophageal resection for two patients, and chemotheraphy for two patients. Others patients died or refuse therapeutic measures.

DISCUSSION

Esophageal carcinoma is categorized as a disease with high mortality rate. In the United States, out of 16,000 new patients 14,000 are dead annually. This shows that the mortality rate of this disease is quite high.[1,2] Esophageal carcinoma is a rarely found in Indonesia, especially among hospitalized patients at Cipto Mangunkusumo hospital. This is proven by the fact that we only found 23 esophageal carcinoma patients during 2002-2008.

Generally, the chief complaint are difficulty or pain in swallowing followed by post-meal vomiting and substantial weight loss. Such findings are in accordance with other authors.[1,3-5] On first presentation to the hospital, almost all patients were anemic, only one patient had hemoglobin level more than 12 g/dL. Further study is necessary to analyze whether this is caused by chronic bleeding or malnutrition due to the malignancy.[6]

There was only one patient with suspected metastasis based on chest X-ray. None of the patients showed suspected esophageal mass on chest X-ray. This shows that chest X-ray alone is less sensitive method to detect the existence of esophageal mass.[1,3,5] Abdominal USG examination found two patients with liver cirrhosis and ascites without metastatic lesions and one patient had metastasis. Another patient had paraaortal lymphnodes enlargement without intraabdominal metastasis and one patient had extra-hepatic intraabdominal mass. The rest of the patient have no abnormalities found on USG.

CT scan was conducted in 11 patients and showed metastatic appearance in five patients. Based on the research, it seems that CT scan is more sensitive than abdominal USG on spotting metastasis. Such finding in relevant to the studies by Marco et al and James et al.[3,7]

The result of upper gastrointestinal endoscopy were: four patients had tumor located at 1/3 proximal esophagus; seven patients had tumor located at 1/3 middle esophagus; and 12 patients had tumor located at 1/3 distal esophagus. According to James et al, 15% esophageal carcinoma is located at 1/3 proximal esophagus, 50% at 1/3 middle esophagus, and 35% at 1/3 at distal esophagus.[7]

Publication of National Cancer Institutes in the United States in year 2008 stated that the prevalence of adenocarcinoma type esophageal carcinoma in the United States is higher than other squamous cell type.[4] However outside the United State, the prevalence of squamous cell type esophageal carcinoma is higher.[2,4,5,7] Our study demostrated that the prevalence of adenocarcinoma type esophageal carcinoma is higher than squamous cell type. Further research should be performed to analyze whether this id because there are many gastroesophageal reflux disease (GERD) here, causing the prevalence of adenocarcinoma is higher than squamous cell type since GERD is often associated with esophageal cancer type adenocarcinomas.[5,8-12]

Therapeutic measures were performed in 10 patients, consisting of gastrostomia for six patients, gastro-esophageal resection for two patients, and

chemotherapy for two patients. Our study shows that the most patients come at the late stage. On early stage, the recommended therapeutic measure is chemotherapy continued with gastro-esophageal resection.[13]

CONCLUSION

We found that adenocarcinoma type is more frequent than squamous cell type esophageal carcinoma among esophageal cancer patients who were hospitalized at Cipto Mangunkusumo hospital. Almost all patients with esophageal cancer came at late stage.

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