

Upper Gastrointestinal Bleeding in Hasan Sadikin General Hospital ; Analysis of 406 patients during periode 1996 – 1997.

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Abstract

Background: Indonesia is a country with high prevalence of chronic liver diseases (CLD). It may have a specific picture in morbidity and mortality of Upper Gastrointestinal (UGI) bleeding. The aim of this study are to get clinical and endoscopic picture of patients who had history of haematemesis and or melena.

Material and Methods: Retrospective study was done to medical record of all patients admitted to Hasan Sadikin General Hospital Bandung Indonesia with UGI bleeding from January 1996 to December 1997

Result and Discussion: Between January 1996 to December 1997, 406 patients with history of haematemesis and or melena had performed endoscopic procedure, 288 of them were male and 118 were female. Among 406 bleeding patients, 51.7% was found CLD. Male to female ratio were 3 in CLD and 2 in non CLD. Patients' age ranged from 14 to 84 years. The mean age was 55.75 ± 13.15 years. The number of patients whose age > 55 years was 61.2%. Total mortality was 17.2% ; 68.6% of them were > 55 years, mortality rate was same in both sex. Mortality was 25.2% in CLD and 8.7% in non CLD ($p < 0.001$). Mortality was related with age, systolic blood pressure, Hb concentration and red colour in nasogastric tube on admission. Sources of bleeding were esophageal varices (EV) 29.2%, gastroduodenal erosions 24.1%, ulcers 17%, portal hypertensive gastropathy 8.4%, malignancies 6.2%, gastric varices 4.9%, esophagitis 2.2%, others 1%, no bleeding lesion in UGI 3.4% and difficulty identifying the source of bleeding 3%.

Endoscopic hemostasis were performed in 74 patients with active bleeding (59 EV and 19 ulcers). Early hemostasis were achieved equally between sclerotherapy and ligation ($p > 0.05$). Rebleeding occurred in 10/70 (14.9%) of patients. The causes of death in CLD were bleeding 3.8%, hepatic encephalopathy 35.8%. The causes of death in non CLD were pneumonia 41.2%, cardiovascular 36.3% and bleeding 17.6%.

Conclusion: UGI bleeding in male was 2.4 times more than in female. Mortality increased with age. Mortality in CLD was 3 fold greater than in non CLD. The major causes of bleeding were rupture of EV and erosions. The causes of death in CLD were bleeding and encephalopathy but in non CLD was not the actual bleeding.

Introduction

Upper Gastrointestinal Bleeding (UGIB) is a common condition which often lead to an emergency situation, recurrent bleeding and the need blood for transfusion. Mortality rate in western country approximately 10% (1). The patient usually came several hours or days after the first episode. Endoscopic examination was performed for at least several hours after the patients

present in the emergency room and there fore may delay or fail to make the best initial decision. There are several factors that contribute to outcome of the treatment(2,3). Countries with high prevalence of chronic liver disease (CLD) caused by HBV and HCV infection may have different clinical and endoscopic picture of UGIB compare to western country with low prevalence of CLD. Several conditions in patient with CLD such as coagulation defect, low albumin serum, impairment of respiratory and renal functions may influence the outcome of standard treatment (4,5). The aim of our study were to get clinical and endoscopic pictures of patients who had history of hematemesis and or melena. We then would like to analyse clinical outcome of patients with UGIB.

Material and Methods

A retrospective study from medical record of all patients admitted to Hasan Sadikin General Hospital with history of hematemesis and or melena from January 1996 to December 1997. We used univariate methode for statistical analysis.

Result

Between January 1996 to December 1997, we had performed endoscopic procedure to 406 patients with history of hematemesis and or melena. Two hundred and eighty eight patients were male and 118 were female (Table.1)

Table 1. General characteristic of patients with UGI bleeding.

Age	range	:	14-85
	Mean	:	55.75±13.15
	>55 years	:	248
	≤55 years	:	158
Gender	Male	:	288
	Female	:	118
Source of bleeding	29.8%		EV
	24.1%		Erosions
	17 %		Ulcers
	8.4%		Portal hypertensive Gastropathy(PHG)
	6.2%		Upper GI malignancies
	4.9%		GV
	2.2%		Esophagitis
	0.7%		Mallory Weiss
	0.2%		AV Malformation
	3.4%		No Bleeding lesion (NBL)
	3 %		Difficulty identify the source of bleeding (DITS)

We found the mean age was 55.75 years old, 61.2% of patients were over 55 years old. Male was 2.4 times more than female. Rupture of esophageal varices, gastroduodenal erosion and bleeding ulcer were the commonest

causes of UGI bleeding. Portal hypertension related to bleeding was 43.1% of all patients.

The overall mortality was not related to gender, however it was related to systolic blood pressure <100 mm Hg(p=0.026), red aspirate in nasogastric lavage(p=0.05), hemoglobin concentration <10 g% (p=0.015)and age > 55 years(p=0.03).There was no significant difference of mortality in patients with CLD between age >55 years and ≤ 55 years(p=0.26)(Table.2.).Total mortality was 17.2%;sixty eight point nine percent of them were > 55 years.Mortality was 25.2% in CLD and 8.7% in non CLD(p<0.001).

Table.2. Mortality

Gender	Male	50	p=0.92
	Female	20	
Age	Age >55	51	p=0.03
	≤55	19	
Syst BP	<100	26.25%	p=0.026
	>100	15.12%	
Hb concent	<10 g%	26.83%	p=0.015
	>10 g%	14.2%	
NGT	Red colour	25%	p=0.05
	Non red colour	17.95%	
CLD	Age >55	36	p=0.26
	≤55	17	
Non CLD	Age >55	15	p=0.04
	≤55	2	

Our study found that 51.7% of patients with UGI bleeding had CLD.Male to female ratio in CLD was 3;in non CLD was 2. Major causes of bleeding in CLD were EV ruptured, portal hypertensive gastropathy and GV ruptured. Erosion and bleding ulcers were 7.6% and 4.8% respectively. In non CLD patients,most of bleeding were caused by erosions, ulcers and advanced cancers of UGI. We had difficulty to identify the sources of bleeding in 2.9% of CLD patients and in 3.1% of non CLD patients.We could not identify bleeding lesion on UGI endoscopic examination in 1.4% of CLD and in 5.6 % of non CLD patients.Mortality in CLD patients was significantly higher than non CLD patients in each group of age, but it was not depend on sex(Table.3.)

Table 3.UGI bleeding in CLD and non CLD

	CLD	non CLD	
n	210	196	
Age : mean	55.0 ± 10.98	56.28 ± 15.81	ns
>55	127	121	ns
≤55	83	75	
Gender			
Male	158	130	ns
Female	52	66	
Source of bleeding			
57.6%	EV	46.4%	Erosions
18.2%	HPG	30.1%	Ulcers
9.5%	GV	7.7%	Gastric Ca
7.6%	Erosions	2.6%	Eso Ca
4.8%	Ulcers	2.6%	Periamp Ca
2.9%	DITS	1.5%	Mallory Weiss
1.4%	NBL	0.5%	AVM
		3.1%	DITS
		5.6%	NBL
Mortality			
Total	53	17	p=0.001
Age			
>55	36	15	p=0.003
≤55	17	2	p=0.002
Gender			
Male	39	11	p=0.4
Female	14	6	p=0.5

We performed endoscopic sclerotherapy and ligation on 59 EV patients with active bleeding. Successful hemostasis with ligation and sclerotherapy were achieved in 89.3% and 87.1% respectively (p=0.88). No significant difference in rebleeding rate between ligation and sclerotherapy (p=0.9). In 19 patients with bleeding ulcers we performed injection of saline-adrenaline solution. Hemostasis occurred in 95% of patients. Rebleeding occurred in 16.7% of patients.(Table.4)

Table 4. The result of endoscopic hemostasis in patients with active bleeding.

	Early hemostasis	Rebleeding
EV		
Sclerotherapy	27/31	4/27
Ligation	25/28	3/25
	p=0.88	p=0.9
Ulcers		
Injection	18/19	3/18

Causes of death in CLD were mainly bleeding and encephalopathy. In non CLD patients the causes of death were respiratory and cardiovascular diseases (Table.5)

Table 5. The causes of death

	CLD	Non-CLD	
Bleeding	19	3	p=0.0018
Encephalopathy	19	-	-
Respiratory disease	7	7	p=0.89
Cardiovascular	6	6	p=0.86
Renal disease	2	1	p=0.9

Discussion

Our study showed that the mean age was 55.75 years and ratio male to female was 2.4. Patients age >55 years was 1.6 fold greater than age ≤ 55 years. Previous study showed that male was more frequent than female and majority of patient's age was >60 years.(6). Most bleeding were caused by EV rupture, erosions and bleeding ulcers. The result of our study was different with the result of previous study in western country which showed the main cause of bleeding were ulcer and erosion (6,7). Rate of EV rupture in our study was lower than the result of previous studies in our country(8). It might related to the difference of HBV and HCV infections rate. The prevalence of HBV and HCV in our city are 5% and 3% respectively (9). UGI bleeding related to portal hypertension was 43.1 % of the total patients, however bleeding related to portal hypertension and bleeding not related to portal hypertension were 85.2% and 14.8% of CLD patients, respectively. In non CLD patients the bleeding caused by erosions and ulcers was 46,4% and 30.1%, respectively. Many studies reported that majority of erosion and bleeding ulcer caused by nonsteroid antiinflammatory drugs(10.11.12).It mean that consumption of NSAID by CLD patient may be lower than non CLD patient. In overall the mortality was not related to sex, but it was related

to age .This finding was not different with others studies(5,13). However in CLD patients, the mortality was not related to age, we assumed that the mortality in CLD patient may had relation with severity of liver diseases or with portal hypertension.The result of endoscopic treatment in EV with active bleeding was equal between sclerotherapy and ligation. Our results were similar with other study(14).The cause of death in non CLD patients was not the actual bleeding,but most of them died because of co-morbid illness. Conversely in CLD patients,the majority of patients died because of CLD related illnesses such as encephalopathy and coagulopathy.

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