

Compare the Outcomes Between Variceal and Non-Variceal Upper Gastrointestinal Bleeding in Cirrhotic Patients

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ABSTRACT

Objective: To examine the clinical outcomes of cirrhotic patients presented with variceal and non-variceal gastrointestinal bleeding.

Study Design: Comparative/Observational

Place & Duration of Study: This study was conducted in the Department of Gastroenterology/Medicine at Social Security Teaching Hospital, Lahore from 01-06-2019 to 31-12-2019.

Methodology: One hundred and thirty cirrhotic patients of both genders with ages 20 to 70 years presented with upper gastrointestinal bleeding were included. They were divided in two groups. Group I consist of 65 patients with acute variceal bleeding and group II contains 65 patients with non-variceal bleeding were examined. Clinical outcomes such as mortality, length of hospital stay, intensive care admission and re-bleeding were examined and compared the findings between both groups.

Results: There were 42 (64.62%) male patients and 23 (35.38%) female patients in group I and in group II, 45 (69.23%) were male and 20 (30.77%) were females. Mean age of patients in variceal group was 52.38±10.43 years and in non-variceal group mean age were 57.68±10.36 years. Oesophageal varices were the most common etiology in acute variceal bleeding group 41 (63.07%) and in non-variceal bleeding group it was found in 22 (33.84%) patients. No significant difference found in term of mortality between both groups I and II 9 (13.85%) vs 7 (10.77%). No significant difference was found in length of hospital stay 6.45±1.26 vs 7.02±1.37 days. Rebleeding was significantly high in patients with non-variceal bleeding 20 (30.77%) than variceal bleeding 8 (12.31%) with p-value <0.05.

Conclusion: In variceal bleeding patients, mortality rate and 30 days rebleeding rate was high as compared to non-variceal bleeding patients. However, no significant difference found regarding length of hospital stay between acute variceal bleeding patients and non-variceal bleeding patients.

Keywords: Cirrhosis, Upper gastrointestinal bleeding, Variceal, Non-variceal, Hospital stay, Mortality, Rebleeding

INTRODUCTION

Variceal rupture is one of the primary causes of upper gastrointestinal (GI) bleeding and is a significant cause of death and complications in patients with cirrhosis of the liver.¹ Variceal bleeding is estimated to stop spontaneously in 40% to 50 % of cases, but there was evidence that early mortality rates for the first variceal bleeding surpass 30% in cirrhosis patients.² Furthermore, all deaths that occur after 6 weeks of admission due to variceal bleeding are deemed to be bleeding-related fatalities because the risk of rebleeding and fatalities is the greatest in the first 6 weeks.³ The risk of rebleeding has reduced to the same amount as the previous risk of bleeding, and about 30 per cent of variceal bleeding patients are estimated to have died after 12 months of bleeding.⁴

Liver cirrhosis is the most frequent cause of portal hypertension and can result in the appearance of oesophageal varicose veins.⁵ In Pakistan, the prevalence of hepatitis and liver cirrhosis is very high, leading to a rise in upper GI bleeding.⁶

Acute variceal and non-variceal upper GI bleeding is not unusual in cirrhotic cases, clinical and endoscopic characteristics of patients with this condition were reported

very rarely^{7,8} and clinical results and mortality were not measured in particular investigations. Given that chronic liver disease has a noxious effect in patients with acute variceal bleeding and non-variceal bleeding^{9,10} awareness of these patients' health conditions and mortality predictors becomes imperative.

MATERIALS AND METHODS

This comparative/observational study was conducted at Social Security Teaching Hospital, Lahore from 01-06-2019 to 31-12-2019. A total of 130 cirrhotic patients of both genders with ages 20 to 70 years presented with upper gastrointestinal bleeding were enrolled. Patients detailed demographic including age, sex and residence were recorded. Patients readmitted due to UGIB, already on management of UGIB and those who were not interested and do quit during analysis were excluded. Patients underwent upper Endoscopy. Two groups were maintained. Group I consist of 65 patients with acute variceal bleeding and group II contains 65 patients with non-variceal bleeding were examined. Acute variceal bleeding is defined as the detection of varices on endoscopy with high risk stigmata. Clinical outcomes such

as mortality, length of hospital stay, Need to Intensive care and rebleeding were analyzed and compare the findings between both groups. All the data was analyzed by SPSS 21. Chi-square test was applied. Mean and SD was obtained. P-value <0.05 was considered as statistically significant.

RESULTS

There were 42 (64.62%) male patients and 23 (35.38%) female patients in group I and in group II, 45 (69.23%) were male and 20 (30.77%) were females. Mean age of patients in variceal group was 52.38±10.43 years and in non-variceal group mean age were 57.68±10.36 years, a significant difference was observed regarding age between both groups with p-value <0.05 (Table 1).

Oesophageal varices alone were the most frequent etiology in group I patients found in 41 (63.07%) followed by esophageal and fundal varices 15 (23.08%) and fundal varices 9 (13.85%). In group II patients gastritis was the most frequent cause found in 34 (52.31%) patients followed by esophageal 22 (33.84%), gastric and duodenal ulcer 5 (7.69%) and gastric ulcer in 4 (6.15%) patients respectively (Table 2).

No significant difference found in term of mortality between both groups I and II 9 (13.85%) vs 7 (10.77%). No significant difference was found in length of hospital stay 6.45±1.26 vs 7.02±1.37 days and ICU admission 14 (21.54%) Vs 11 (16.92%) between group I and II. Rebleeding was significantly high in patients with non-variceal bleeding 20 (30.77%) than variceal bleeding 8 (12.31%) with p-value <0.05 (Table 3).

Table 1: Demographics of all the patients

Variable	Group A	Group B	P value
Age (years)	52.38±10.43	57.68±10.36	0.021
Gender			
Male	42 (64.62%)	45 (69.23%)	N/S
Female	23 (35.38%)	20 (30.77%)	

Table 2: Etiology of upper GI bleeding

Etiology	Group I	Group II
Esophageal	41 (63.07%)	22 (33.84%)
Esophageal & fundal	15 (23.08%)	-
Fundal	9 (13.85%)	-
Gastritis	-	34 (52.31%)
Gastric & duodenal ulcer	-	5 (7.69%)
Gastric ulcer	-	4 (6.15%)

Table 3: Comparison of outcomes between both groups

Outcome	Group I	Group II	P value
Mortality	9 (13.85%)	7(10.77%)	N/S
ICU admission	14 (21.54%)	11 (16.92%)	N/S
Hospital stay (days)	6.45±1.26	7.02±1.37	N/S
Rebleeding	8 (12.31%)	20 (30.77%)	0.036

DISCUSSION

One of the most common causes of death in patients with chronic liver disease is upper GI bleeding. Overall, 3 to 14 percent of mortality were reported due to upper gastrointestinal bleeding.^{11,12} All of the risk factors and comorbidities were responsible for this life-threatening

condition, and upper gastrointestinal bleeding was shown to be the most prevalent cause of death in cirrhotic patients.¹³

The present study was conducted with objectives to evaluation of clinical outcomes of acute variceal bleeding and non-variceal bleeding in cirrhotic patients. Many of studies have been conducted to examine the mortality rate among acute variceal bleeding patients or non-variceal bleeding in cirrhosis patients. Only few of studies have been conducted to compare the clinical outcomes between variceal and non-variceal.^{14,15} In present study we included 130 cirrhotic patients presented with upper GI bleeding from which 66.92% patients were male while 33.08% patients were females, no significant difference was found regarding gender between both groups. Patients with non-variceal bleeding were significantly older that variceal bleeding patients (p=0.004). These results showed similarity to some other studies in which male patients population was high 60 to 75% as compared to females with average age of 55 years.^{16,17}

In the present study, we found that esophageal varices alone were the most frequent cause of upper GI bleeding in group I patients found in 41 (63.07%) followed by esophageal and fundal varices 15 (23.08%) and fundal varices 9 (13.85%). In group II patients gastritis was the most frequent cause found in 34 (52.31%) patients followed by esophageal 22 (33.84%), gastric and duodenal ulcer 5 (7.69%) and gastric ulcer in 4 (6.15%) patients respectively. Many of previous studies demonstrated that esophageal varices were the most frequent cause of variceal GI bleeding.^{18,19} A study conducted by Hafez et al²⁰ reported that gastritis was the most common cause of upper GI bleeding.

In present study no significant difference found in term of mortality between both groups I and II 9 (13.85%) vs 7 (10.77%). A study conducted by Tandon et al²¹ reported mortality 15.1% vs 9.3% between AV bleeding and NV bleeding patients. In the present study we found no significant difference regarding ICU admission between both groups I and II 14 (21.54%) vs 11 (16.92%). No significant difference according to length of hospital stay 6.45±1.26 vs 7.02±1.37 days between both groups. These results were comparable to some other studies in which there were no significant difference found regarding hospital stay and ICU admission.²²⁻²⁴ Rebleeding was significantly high in patients with non-variceal bleeding 20 (30.77%) than variceal bleeding 8 (12.31%) with p-value <0.05. A study conducted by Tantai et al²⁵ reported that out of 93 non-variceal bleeding patients, rebleeding found in 4.3% and mortality in 14% patients. Tantai et al reported that among 330 cirrhotic patients with variceal bleeding, the rates of in-hospital rebleeding and mortality were 20.3% and 10.6%, respectively.

CONCLUSION

In variceal bleeding patient's mortality rate and in-hospital rebleeding rate was high as compared to non-variceal bleeding patients. However, no significant difference found regarding length of hospital stay between acute variceal bleeding patients and non-variceal bleeding patients.

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