

Editorial

Clinical Profile and Outcomes of Acute Variceal Bleed

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J Digest Endosc 2019;10:172–173

Acute variceal bleed is the most severe fatal complication encountered in cirrhotic patients with uncontrolled portal hypertension with the in-hospital mortality remaining as high as 20% despite advances in management strategies.¹ The mortality rate is highest within the first few days of bleeding and decreases over the following 6 weeks.² The risk of bleeding from esophageal varices (EV) is 5 to 15% annually. Of the several factors that increase the risk of bleeding, wall tension of the varix is the most important—which is directly related to its diameter and pressure. The bleeding risk in small varices (less than 5 mm in diameter) is 7% in 2 years, but the risk increases to 30% in large varices (if the diameter is greater than 5 mm). Other factors associated with increased risk of bleeding are decompensated cirrhosis with Child Turcotte Pugh (CTP) B and C, red wale sign, and alcoholic liver disease.³

For primary prophylaxis of variceal bleeding, a meta-analysis by Lo et al found that there is no difference in bleeding related and all-cause mortality rates between β -blockers and endoscopic variceal ligation (EVL), and there is also no evidence that the combination therapy (β -blockers and EVL) is superior to monotherapy.⁴

Following an acute episode of variceal bleed, patients are at a high risk of rebleeding. The risk of rebleeding after 1 year is 60%, with a mortality rate of 33%. All patients should therefore receive nonselective β -blocker in combination with surveillance oesophagogastroduodenoscopy (OGD) to achieve the obliteration of EV.⁵

Though there are differences in etiological profile, management strategies, and outcomes on acute variceal bleed worldwide, Baveno (updated VI) consensus⁶ and the NICE Guidelines on Acute Upper GI bleeding⁷ are now widely accepted for the management of variceal bleeding. Despite improved outcomes after variceal bleed, few other factors such as duration of vasoactive drug (terlipressin, somatostatin, and octreotide) therapy after EVL, use of proton pump inhibitor, primary prophylaxis for gastric varices, antibiotic requirement and duration, timing of endoscopy, etc may contribute to reduce the mortality associated with variceal bleed

management which remain unclear. Indian studies on the audit of prognostic indicators, management and outcomes of acute variceal bleed management are scarce.

In the current issue of the *Journal of Digestive Endoscopy*, the author (Vijay Kumar) reported an audit of clinical profile and outcomes of acute variceal bleed in a tertiary care hospital. It was a retrospective analysis of acute variceal bleeding patients admitted to a tertiary care center from August 2018 to December 2018. The data were generated through a computerized electronic record system and considered for analysis. The authors excluded patients with diagnosis of hepatorenal syndrome, spontaneous bacterial peritonitis, multiorgan dysfunction, and sepsis and hepatic encephalopathy from study to avoid bias in mortality results. All patients received terlipressin on admission and every 6 hours thereafter, which was continued for 24 hours after endotherapy. Antibiotic was administered before and after endotherapy till the discharge. All the patients underwent endotherapy within 24 hours of presentation. OGD scopy was done by trained gastroenterologists. Oesophageal varices were classified into small (<5 mm) and large varices (>5 mm) as approved by the American Association for the Study of Liver Diseases. Gastric varices were classified according to Sarin's classification. The definition of acute variceal bleeding, clinically significant bleeding, rebleeding, and clinically significant rebleeding were based on the Baveno VI consensus.

A total of 107 cases was analyzed in this study. Cirrhosis was the cause of variceal bleed in 89.7% cases, and alcohol was the etiology of cirrhosis in 78.1%. Majority of the patients (84.1%) were in CTP class B and C. About 45.7% underwent OGD scopy within 12 hours of acute variceal bleed. Nearly 77.6% patients had large oesophageal varices. Gastric varices were seen in 37.7% with GOV1 (Gastro-Oesophageal Varices) being the most common subtype. Five patients (4.7%) required glue injection for gastric varices. Rebleed rate was 0.9%. Mortality due to variceal bleed was 9.3%. Significant associations were observed between diagnosis and outcome ($p = 0.013$), where majority of the cases with cirrhosis got discharged;

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DOI <https://doi.org/10.1055/s-0039-3401402>
ISSN 0976-5042.

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however, more of mortality cases had noncirrhotic portal fibrosis ($p = 0.001$). In this study, the authors found that acute rebleed, low mean arterial pressure, low platelet count, high serum creatinine, elevated serum total bilirubin, high international normalized ratio (INR), and higher model for end-stage liver disease were associated with increased risk of mortality. These results were comparable in a similar retrospective multicenter study done on a larger sample size by Chalasani et al.⁸ Door-to-endoscopy time (<12 hours or 12 to 24 hours) did not affect the mortality ($p = 0.699$). Terlipressin given for only 24 hours after endotherapy was equally effective as terlipressin given for 5 days after endotherapy. Age, sex, door-to-endoscopy time, variceal grade, CTP grade, and hemoglobin on admission did not emerge as predictors of mortality in this study.

However, there are major limitations in this study such as retrospective design, small sample size due to inclusion of patients within a short duration, lack of risk stratification and risk factors assessment (such as degree of fibrosis, hepatocellular carcinoma, portal vein thrombosis, etc). This study focused only on mortality due to variceal bleed, and it does not give any information about the all-cause mortality. The mortality related to variceal bleed can be reduced if patients are timely managed. Rescue therapies after unsuccessful endotherapy such as doing transjugular intrahepatic portosystemic shunt (TIPSS), balloon-occluded retrograde transvenous obliteration (BRTO), esophageal self-expandable metallic stent (SEMS) and endoscopic ultrasound (EUS)-guided coiling could have helped to reduce bleeding-related mortality. It is noteworthy that in this study

that terlipressin therapy continued only for 24 hours after successful EVL is found to be safe and cost-effective compared with standard 5-day therapy. However, more randomized controlled trials with large sample size are needed to conclude this finding.

Conflict of Interest

None declared.

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