open access

Original Research Article

Clinical Profile and Endoscopic Spectrum of Upper Gastrointestinal Bleeding at a Tertiary Care Centre.

Shubham Suresh Dhere [1], Shantanu Milind Patange [2], Om Deshmukh [3], Sangamesh Dhanure[4], Shahina Shaikh [5]

1. MBBS, MD, Junior Resident, General Medicine, Sapthagiri institute of medical sciences
2. MBBS, MD, Junior Resident, General Medicine , Sapthagiri institute of medical sciences
3. MBBS, MD, Junior Resident , General Medicine , Sapthagiri institute of medical sciences
4. MBBS, MD, Junior Resident , General Medicine , Sapthagiri institute of medical sciences
5. MBBS, MD, Junior Resident , General Medicine 2, Sapthagiri institute of medical sciences

Correspondence: Dr Shubham Suresh Dhere

Received: 29 Jul 2026 | Accepted: 03 Aug 2026 | Published: 06 Aug 2026

Abstract

Background: Upper gastrointestinal bleeding (UGIB) is a common medical emergency associated with considerable morbidity and mortality despite advances in endoscopic and medical management. Understanding its clinical profile and endoscopic spectrum is essential for timely diagnosis and effective treatment.
Methods: This hospital-based observational study included 100 consecutive adult patients presenting with UGIB at a tertiary care centre. Demographic characteristics, clinical presentation, laboratory findings, endoscopic diagnoses, therapeutic interventions, and in-hospital outcomes were recorded and analysed using appropriate statistical methods.
Results: The mean age of the patients was 54.82 ± 15.64 years, and 72% were males. Chronic liver disease (38%) was the most common comorbidity. Haematemesis (38%) was the commonest presenting symptom, while pallor (71%) was the most frequent clinical finding. Endoscopy identified oesophageal varices (31%) as the leading cause of UGIB, followed by duodenal ulcer (22%) and erosive gastritis (13%). Therapeutic endoscopy was performed in 61% of patients, with variceal band ligation being the most common intervention (29%). Blood transfusion was required in 68% of patients. Variceal bleeding was significantly associated with alcohol consumption, chronic liver disease, shock at presentation, higher INR, increased blood transfusion requirements, and therapeutic endoscopic intervention (all $p<0.05$). The mean hospital stay was 6.82 ± 3.41 days, and in-hospital mortality was 6%.
Conclusion: Variceal bleeding was the predominant cause of UGIB and was associated with greater clinical severity than non-variceal bleeding. Early resuscitation, prompt endoscopic evaluation, and timely therapeutic intervention are essential for improving patient outcomes.
Keywords: Upper gastrointestinal bleeding; Endoscopy; Oesophageal varices; Peptic ulcer disease; Variceal bleeding; Therapeutic endoscopy; Clinical profile.

Introduction

Upper gastrointestinal bleeding (UGIB) is one of the most common and potentially life-threatening emergencies encountered in gastroenterology. It is defined as bleeding originating proximal to the ligament of Treitz and commonly presents with haematemesis, coffee-ground vomiting, melena, or, in severe cases, haematochezia with haemodynamic instability[1]. Despite major advances in endoscopic techniques, pharmacotherapy, blood transfusion practices, and intensive care, UGIB continues to be associated with considerable morbidity, mortality, prolonged hospitalisation, and healthcare costs. The annual incidence is estimated at 50–150 cases per 100,000 population, with mortality remaining between 5% and 10%, particularly among elderly patients and those with significant comorbidities [2,3].UGIB is broadly classified into non-variceal and variceal bleeding. Non-variceal bleeding

accounts for nearly 80–90% of cases, with peptic ulcer disease remaining the leading cause worldwide. Other important causes include erosive gastritis, duodenitis, oesophagitis, Mallory–Weiss tears, vascular malformations, Dieulafoy lesions, and upper gastrointestinal malignancies. Variceal haemorrhage, usually resulting from portal hypertension secondary to chronic liver disease, is less frequent but carries a substantially higher risk of rebleeding and mortality. The distribution of these aetiologies varies according to regional differences in Helicobacter pylori prevalence, alcohol consumption, chronic liver disease, and the increasing use of non-steroidal anti-inflammatory drugs (NSAIDs), antiplatelet agents, and anticoagulants [2,4].Early recognition and prompt management are crucial for improving outcomes. Initial treatment focuses on haemodynamic stabilisation, airway protection, fluid resuscitation, correction of coagulopathy, and blood transfusion when indicated. Risk stratification using validated scoring systems such as the Glasgow–Blatchford Score, Rockall Score, and AIMS65 assists in identifying high-risk patients and determining the timing of endoscopy and the level of care required [5,6]. Upper gastrointestinal endoscopy remains the diagnostic and therapeutic gold standard, enabling localisation of the bleeding source and immediate interventions such as injection therapy, thermal coagulation, haemoclip application, and endoscopic variceal ligation. Early endoscopy, preferably within 24 hours after stabilisation, has been shown to reduce rebleeding, surgical intervention, hospital stay, and mortality [2,3,7,8].The epidemiology and endoscopic spectrum of UGIB have evolved owing to increasing life expectancy, the rising burden of chronic liver disease and metabolic disorders, widespread use of ulcerogenic medications, and improved access to endoscopic services. In India, chronic liver disease, alcohol-related liver disease, viral hepatitis, and Helicobacter pylori infection remain important contributors, although the relative frequency of different endoscopic diagnoses varies considerably across institutions and regions [9–11].Understanding the demographic profile, clinical presentation, risk factors, and endoscopic findings of UGIB is essential for timely diagnosis, appropriate therapeutic intervention, and optimal utilisation of healthcare resources. Tertiary care centres, which manage a large number of referred and complex cases, provide valuable insights into regional disease patterns and treatment practices [10–12]. Therefore, the present study was undertaken to evaluate the clinical profile, endoscopic spectrum, and therapeutic interventions among patients presenting with upper gastrointestinal bleeding at a tertiary care centre.

Methodology:

This study was conducted as a hospital-based observational cross-sectional study to evaluate the clinical profile and endoscopic spectrum of patients presenting with upper gastrointestinal bleeding (UGIB) at a tertiary care centre.The study was carried out in the Department of General Medicine at a tertiary care teaching hospital. The study population comprised adult patients presenting with clinical features suggestive of upper gastrointestinal bleeding who were admitted to the tertiary care centre during the study period.A total of 100 consecutive patients fulfilling the eligibility criteria were included in the study.A consecutive sampling technique was used, wherein all eligible patients presenting during the study period were enrolled until the desired sample size of 100 participants was achieved.

Eligibility Criteria

Inclusion Criteria

Patients fulfilling all of the following criteria were included:

- Age ≥18 years.
- Patients presenting with clinical evidence of upper gastrointestinal bleeding, including haematemesis, coffee-ground vomiting, melena, or both.
- Patients who underwent upper gastrointestinal endoscopy during the index admission.
- Patients who provided written informed consent to participate in the study.
- Exclusion Criteria
- Patients with any of the following were excluded:
- Age below 18 years.
- Lower gastrointestinal bleeding or bleeding of uncertain origin.
- Patients who declined consent.
- Patients who were too haemodynamically unstable to undergo endoscopy and died before definitive evaluation.
- Patients with incomplete clinical records or unavailable endoscopic findings.

Study Procedure

After obtaining approval from the Institutional Ethics Committee and written informed consent from the participants or their legally authorised representatives, all eligible patients were enrolled consecutively. A detailed clinical history was obtained, including demographic characteristics, presenting complaints, duration of symptoms, previous episodes of gastrointestinal bleeding, alcohol consumption, smoking status, use of non-steroidal anti-inflammatory drugs (NSAIDs), antiplatelet agents, anticoagulants, and associated comorbid illnesses such as chronic liver disease,

hypertension, diabetes mellitus, chronic kidney disease, and cardiovascular disease.A thorough physical examination was performed, including assessment of general condition, pallor, icterus, peripheral oedema, signs of chronic liver disease, abdominal examination, and haemodynamic parameters such as pulse rate, blood pressure, respiratory rate, oxygen saturation, and shock index.Baseline laboratory investigations included complete blood count, haemoglobin level, platelet count, liver function tests, renal function tests, serum electrolytes, coagulation profile (prothrombin time/international normalised ratio), blood grouping and cross-matching, and other investigations as clinically indicated.All patients underwent upper gastrointestinal endoscopy after initial haemodynamic stabilisation according to institutional protocols. Endoscopy was performed by experienced gastroenterologists using standard video endoscopes. The timing of endoscopy, source of bleeding, endoscopic diagnosis, presence of active bleeding or stigmata of recent haemorrhage, variceal status, Forrest classification for peptic ulcers, and therapeutic endoscopic interventions performed were documented.

Patients received standard medical management, including intravenous proton pump inhibitors, vasoactive agents for suspected variceal bleeding, blood component transfusion, antibiotics when indicated, and endoscopic haemostatic therapy according to established institutional protocols.Clinical outcomes including requirement for blood transfusion, endoscopic intervention, intensive care unit admission, rebleeding during hospital stay, duration of hospitalisation, surgical intervention, and in-hospital mortality were recorded.

Study Variables

Primary Outcome Measures

- Clinical profile of patients with upper gastrointestinal bleeding.
- Endoscopic spectrum of upper gastrointestinal bleeding.
- Secondary Outcome Measures
- Etiological distribution of upper gastrointestinal bleeding.
- Requirement for blood transfusion.
- Requirement for therapeutic endoscopy.
- Duration of hospital stay.
- Rebleeding during hospitalisation.
- In-hospital mortality.

Data Collection

Data were collected using a predesigned, structured case record form. All demographic, clinical, laboratory, endoscopic, therapeutic, and outcome-related variables were recorded prospectively and subsequently entered into a Microsoft Excel spreadsheet after verification for completeness and accuracy.

Statistical Analysis

The collected data were entered into Microsoft Excel and analysed using Statistical Package for the Social Sciences (SPSS) software version 26.0 (IBM Corp., Armonk, NY, USA). Continuous variables were expressed as mean ± standard deviation (SD) for normally distributed data or median with interquartile range (IQR) for non-normally distributed data. Categorical variables were summarised as frequencies and percentages.The normality of continuous variables was assessed using the Shapiro–Wilk test. Comparisons between categorical variables were performed using the Chi-square test or Fisher's exact test, as appropriate. Continuous variables were compared using the Student's independent t-test for normally distributed data and the Mann–Whitney U test for non-normally distributed data. For comparisons involving more than two groups, one-way analysis of variance (ANOVA) or the Kruskal–Wallis test was used as appropriate. A p-value <0.05 was considered statistically significant.

Results:

A total of 100 patients with upper gastrointestinal bleeding were included in the study. The mean age of the study population was 54.82 ± 15.64 years, with a median age of 56 years (IQR: 44–67) and an age range of 19–86 years. Most patients belonged to the 41–60-year age group (39.0%), followed by those aged >60 years (37.0%) and 18–40 years (24.0%). Males predominated, accounting for 72.0% of the study population. Chronic liver disease was the most common comorbidity (38.0%), followed by hypertension (34.0%) and diabetes mellitus (29.0%). Alcohol consumption and smoking were reported in 45.0% and 39.0% of patients, respectively, while 26.0% had a history of NSAID use and 11.0% were receiving anticoagulant or antiplatelet therapy (Table 1).Haematemesis was the most frequent presenting symptom (38.0%), followed by combined haematemesis with melena (29.0%) and isolated melena (27.0%). Coffee-ground vomiting was observed in 6.0%, while syncope was present in 15.0% of patients. On clinical examination, pallor was the commonest finding (71.0%), followed by tachycardia (54.0%), hypotension (23.0%), and shock at presentation (17.0%). The mean haemoglobin concentration was 8.74 ± 2.18 g/dL, platelet count was 186.52 ± 72.84 $\times 10^9$/L, mean INR was 1.54 ± 0.63, blood urea was 52.84 ± 24.91 mg/dL, and serum creatinine was 1.28 ± 0.69 mg/dL

(Table 2).Upper gastrointestinal endoscopy revealed that oesophageal varices (31.0%) were the most common cause of bleeding, followed by duodenal ulcer (22.0%), erosive gastritis (13.0%), and gastric ulcer (11.0%). Other less frequent findings included portal hypertensive gastropathy (6.0%), erosive oesophagitis (5.0%), gastric varices (4.0%), Mallory–Weiss tear (3.0%), gastric malignancy (2.0%), Dieulafoy's lesion (1.0%), angiodysplasia (1.0%), and normal endoscopy (1.0%) (Table 3). The distribution of endoscopic diagnoses is illustrated in Figure 1.Therapeutic endoscopic intervention was performed in 61.0% of patients. Variceal band ligation was the most commonly employed endoscopic therapy (29.0%), followed by adrenaline injection (16.0%), hemoclip application (8.0%), thermal coagulation (5.0%), and injection sclerotherapy (3.0%). Blood transfusion was required in 68.0% of patients, with 44.0% receiving two or more units of packed red blood cells. Fresh frozen plasma and platelet transfusions were administered to 19.0% and 7.0% of patients, respectively. Nearly all patients (96.0%) received intravenous proton pump inhibitor therapy, while vasoactive agents such as terlipressin or octreotide were administered in 35.0% of cases (Table 4). The pattern of therapeutic interventions is depicted in Figure 2.Patients with variceal bleeding were significantly more likely to be male (88.6% vs. 63.1%, $p = 0.008$), have a history of alcohol use (80.0% vs. 26.2%, $p < 0.001$), and have underlying chronic liver disease (97.1% vs. 6.2%, $p < 0.001$) compared with those with non-variceal bleeding. They also had significantly higher INR values (1.92 ± 0.64 vs. 1.33 ± 0.41, $p < 0.001$), a greater incidence of shock at presentation (31.4% vs. 9.2%, $p = 0.005$), higher blood transfusion requirements (88.6% vs. 56.9%, $p = 0.001$), and were more likely to require therapeutic endoscopic intervention (94.3% vs. 43.1%, $p < 0.001$). There were no statistically significant differences in age ($p = 0.372$) or haemoglobin levels ($p = 0.071$) between the two groups (Table 5).The mean duration of hospital stay was 6.82 ± 3.41 days. Intensive care unit admission was required in 21.0% of patients, while 9.0% experienced rebleeding during hospitalisation. Surgical intervention and angiographic embolisation were necessary in 3.0% and 2.0% of patients, respectively. Mechanical ventilation was required in 8.0% of cases. The overall in-hospital mortality rate was 6.0% (Table 6). The distribution of major clinical outcomes is presented in Figure 3.

Table 1. Baseline Demographic and Clinical Characteristics of the Study Population (n = 100)

Variable	Value
Age (years)	
Mean ± SD	54.82 ± 15.64
Median (IQR)	56 (44–67)
Range	19–86
Age Group (years)	n (%)
18–40	24 (24.0)
41–60	39 (39.0)
>60	37 (37.0)
Sex	
Male	72 (72.0)
Female	28 (28.0)
Comorbidities	n (%)
Chronic liver disease	38 (38.0)
Hypertension	34 (34.0)
Diabetes mellitus	29 (29.0)
Chronic kidney disease	12 (12.0)
Coronary artery disease	9 (9.0)
Alcohol consumption	45 (45.0)
Smoking	39 (39.0)
NSAID use	26 (26.0)
Anticoagulant/Antiplatelet use	11 (11.0)

Table 2. Clinical Presentation and Laboratory Profile (n = 100)

Variable	Value
Presenting Symptoms	n (%)
Haematemesis	38 (38.0)
Melena	27 (27.0)
Haematemesis + Melena	29 (29.0)
Coffee-ground vomiting	6 (6.0)

Syncope	15 (15.0)
Clinical Findings	
Hypotension	23 (23.0)
Tachycardia	54 (54.0)
Pallor	71 (71.0)
Shock at presentation	17 (17.0)
Laboratory Parameters	Mean ± SD
Haemoglobin (g/dL)	8.74 ± 2.18
Platelet count (×10⁹/L)	186.52 ± 72.84
INR	1.54 ± 0.63
Blood urea (mg/dL)	52.84 ± 24.91
Serum creatinine (mg/dL)	1.28 ± 0.69

Table 3. Endoscopic Spectrum of Upper Gastrointestinal Bleeding (n = 100)

Endoscopic Diagnosis	**n (%)**
Oesophageal varices	31 (31.0)
Gastric varices	4 (4.0)
Duodenal ulcer	22 (22.0)
Gastric ulcer	11 (11.0)
Erosive gastritis	13 (13.0)
Erosive oesophagitis	5 (5.0)
Portal hypertensive gastropathy	6 (6.0)
Mallory–Weiss tear	3 (3.0)
Gastric malignancy	2 (2.0)
Dieulafoy's lesion	1 (1.0)
Angiodysplasia	1 (1.0)
Normal endoscopy	1 (1.0)

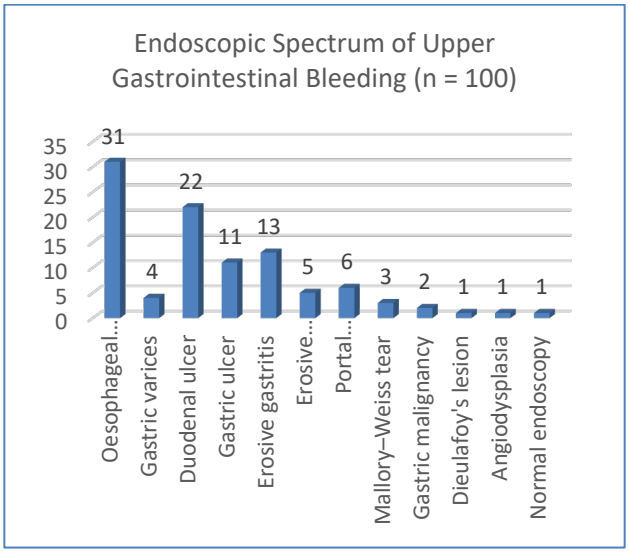

Figure 1 Endoscopic Spectrum of Upper Gastrointestinal Bleeding (n = 100)

Table 4. Therapeutic Endoscopic Intervention and Medical Management (n = 100)

Variable	**n (%)**
Therapeutic endoscopy performed	61 (61.0)
Variceal band ligation	29 (29.0)
Injection adrenaline	16 (16.0)
Hemoclip application	8 (8.0)
Thermal coagulation	5 (5.0)
Injection sclerotherapy	3 (3.0)
Blood transfusion required	68 (68.0)
≥2 units PRBC transfused	44 (44.0)
Fresh frozen plasma	19 (19.0)
Platelet transfusion	7 (7.0)
Intravenous proton pump inhibitor	96 (96.0)
Vasoactive drugs (Terlipressin/Octreotide)	35 (35.0)

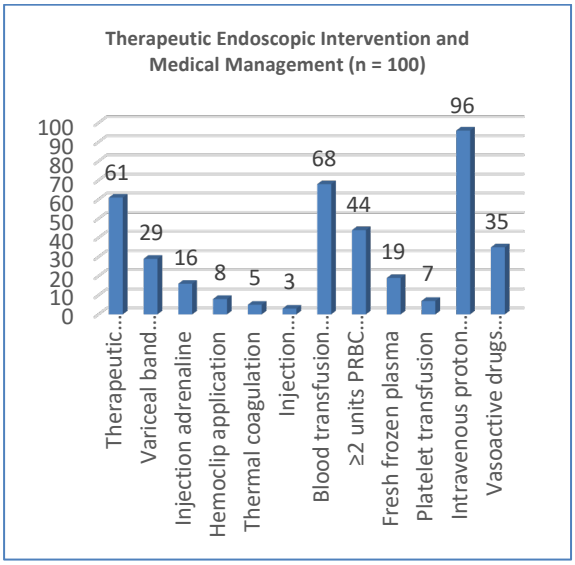

Figure 2 Therapeutic Endoscopic Intervention and Medical Management (n = 100)

Table 5. Comparison Between Variceal and Non-Variceal Bleeding

Variable	Variceal Bleeding (n=35)	Non-variceal Bleeding (n=65)	p-value
Age (years), Mean ± SD	52.94 ± 13.68	55.83 ± 16.42	0.372
Male	31 (88.6%)	41 (63.1%)	0.008
Alcohol use	28 (80.0%)	17 (26.2%)	<0.001
Chronic liver disease	34 (97.1%)	4 (6.2%)	<0.001
Haemoglobin (g/dL)	8.21 ± 2.01	9.03 ± 2.22	0.071
INR	1.92 ± 0.64	1.33 ± 0.41	<0.001
Shock at presentation	11 (31.4%)	6 (9.2%)	0.005
Blood transfusion required	31 (88.6%)	37 (56.9%)	0.001
Therapeutic endoscopy	33 (94.3%)	28 (43.1%)	<0.001

Table 6. Clinical Outcomes of Patients with Upper Gastrointestinal Bleeding (n = 100)

Outcome	Value
Hospital stay (days), Mean ± SD	6.82 ± 3.41
ICU admission	21 (21.0)
Rebleeding during hospital stay	9 (9.0)
Surgical intervention	3 (3.0)
Angiographic embolisation	2 (2.0)
Mechanical ventilation	8 (8.0)
In-hospital mortality	6 (6.0)

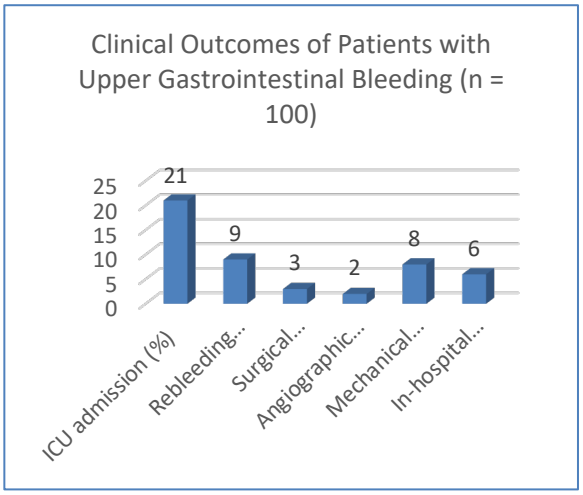

Figure 3 Clinical Outcomes of Patients with Upper Gastrointestinal Bleeding (n = 100)

Discussion

The present study evaluated the clinical profile, endoscopic spectrum, therapeutic interventions, and outcomes of 100 patients with upper gastrointestinal bleeding (UGIB) presenting to a tertiary care centre. UGIB predominantly affected middle-aged and elderly males, and variceal bleeding emerged as the most common endoscopic diagnosis. Patients with variceal bleeding demonstrated greater clinical severity, requiring more frequent blood transfusions and therapeutic endoscopic interventions than those with non-variceal bleeding.The mean age of patients was 54.82 ± 15.64 years, with 76% aged >40 years,

and males constituted 72% of the study population. These findings are comparable with those of Anshul et al.[13], who reported a mean age of 52.19 ± 6.65 years with 82.7% males. Similar demographic trends were observed by Kumar et al.[14] (48.98 ± 14.50 years) and Swarnkar et al.[15] (43.7 ± 15.42 years), confirming the predominance of UGIB among middle-aged men, likely due to greater exposure to alcohol, smoking, chronic liver disease, and NSAID use.Chronic liver disease (38%) was the most common comorbidity, followed by hypertension (34%) and diabetes mellitus (29%). Alcohol consumption (45%) and smoking (39%) were also highly prevalent. These findings are consistent with Anshul et al.[14], who identified alcohol intake as a major risk factor, and Farhan Khan et al.[16], who highlighted alcohol-related liver disease as an important contributor to variceal haemorrhage in North India.Haematemesis (38%) was the commonest presenting symptom, followed by combined haematemesis with melena (29%) and melena alone (27%). Pallor (71%) and tachycardia (54%) were frequent examination findings, while 17% presented with shock. Swarnkar et al.[15] reported melena as the predominant presentation, whereas Anshul et al.[14] similarly found haematemesis and melena to be the major presenting complaints. The higher proportion of haematemesis in our study probably reflects the greater prevalence of variceal bleeding.Laboratory evaluation revealed a mean haemoglobin of 8.74 ± 2.18 g/dL, INR of 1.54 ± 0.63, and blood urea of 52.84 ± 24.91 mg/dL, indicating significant blood loss and coagulopathy. Similar abnormalities have been reported by Anshul et al.[13], who also demonstrated that anaemia and elevated INR were associated with adverse outcomes.Endoscopy identified oesophageal varices (31%) as the leading cause of UGIB, followed by duodenal ulcer (22%), erosive gastritis (13%), gastric ulcer (11%), and gastric varices (4%). Overall, variceal bleeding accounted for 35% of cases. Comparable findings have been reported by Swarnkar et al.[15], Anshul et al.[13], and Kumar et al.[14], whereas peptic ulcer disease remains the predominant cause in Western populations, reflecting regional differences in chronic liver disease prevalence.Therapeutic endoscopy was performed in 61% of patients, with variceal band ligation (29%) being the most common intervention, followed by adrenaline injection (16%) and hemoclip application (8%). Blood transfusion was required in 68% of patients, and 96% received intravenous proton pump inhibitors, consistent with current UGIB management recommendations and previous Indian studies.Patients with variceal bleeding were significantly more likely to be male, have chronic liver disease, consume alcohol, present with shock, require blood transfusions and therapeutic endoscopy, and exhibit higher INR values than those with non-variceal bleeding (all $p<0.05$). Similar observations were reported by Anshul et al.[13], emphasising the greater severity and poorer prognosis associated with portal hypertensive bleeding.Clinical outcomes were favourable, with a mean hospital stay of 6.82 ± 3.41 days, ICU admission in 21%, rebleeding in 9%, and in-hospital mortality of 6%. These findings are comparable to mortality rates reported by Swarnkar et al.[15], Anshul et al.[13], and other contemporary studies.

Conclusion

Upper gastrointestinal bleeding remains a common medical emergency, with variceal bleeding emerging as the leading cause in this tertiary care centre. Middle-aged and elderly males with chronic liver disease and alcohol consumption constituted the majority of affected patients. Patients with variceal bleeding had significantly greater clinical severity, requiring more frequent blood transfusions and therapeutic endoscopic interventions. Early haemodynamic stabilisation, prompt upper gastrointestinal endoscopy, and timely endoscopic haemostasis are crucial for improving clinical outcomes and reducing morbidity and mortality in patients with UGIB.

Limitations

This study was conducted at a single tertiary care centre with a relatively small sample size of 100 patients, which may limit the generalisability of the findings. The observational design precluded assessment of causal relationships between clinical variables and outcomes. Additionally, long-term follow-up data on rebleeding, recurrent hospitalisation, and mortality after discharge were not available. Multicentre studies with larger sample sizes and extended follow-up are warranted to validate these findings.

Ethical approval

Ethical approval for this study was obtained from the Institutional Ethics Committee prior to the

commencement of the study. The study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki and applicable institutional guidelines.

Informed Consent

Written informed consent was obtained from all participants prior to their enrolment in the study.

Funding Statement

The authors received no financial support for the research, authorship, and/or publication of this article.

Conflict of Interest Declaration

The authors declare no conflict of interest.

Data Availability Statement

All data generated or analysed during this study are available from the corresponding author upon reasonable request.

References

1. Lanas A, Dumonceau JM, Hunt RH, Fujishiro M, Scheiman JM, Gralnek IM, et al. Non-variceal upper gastrointestinal bleeding. Nat Rev Dis Primers. 2018;4:18020.
2. Barkun AN, Almadi M, Kuipers EJ, Laine L, Sung J, Tse F, et al. Management of nonvariceal upper gastrointestinal bleeding: Guideline recommendations from the International Consensus Group. Ann Intern Med. 2019;171(11):805-822.
3. Lau JYW, Yu Y, Tang RSY, Chan HCH, Yip HC, Chan SM, et al. Timing of endoscopy for acute upper gastrointestinal bleeding. N Engl J Med. 2020;382(14):1299-1308.
4. Garcia-Tsao G, Abraldes JG, Berzigotti A, Bosch J. Portal hypertensive bleeding in cirrhosis: Risk stratification, diagnosis, and management: 2016 practice guidance by the American Association for the Study of Liver Diseases. Hepatology. 2017;65(1):310-335.
5. Rockall TA, Logan RFA, Devlin HB, Northfield TC. Risk assessment after acute upper gastrointestinal haemorrhage. Gut. 1996;38(3):316-321.
6. Sourabh S, Sharma N, Sharma R, Kumar R, Thakur S, Bodh V, et al. Clinical profile, severity and outcome of acute upper gastrointestinal bleeding in elderly patients compared to non-elderly patients: A prospective observational study. J Assoc Physicians India. 2019;67:30-32.
7. Gralnek IM, Stanley AJ, Morris AJ, Camus M, Lau J, Lanas A, et al. Endoscopic diagnosis and management of nonvariceal upper gastrointestinal hemorrhage (NVUGIH): European Society of Gastrointestinal Endoscopy (ESGE) Guideline - Update 2021. Endoscopy. 2021;53(3):300-332.
8. Wasserman RD, Abel W, Monkemuller K, Yeaton P, Kesar V, Kesar V, et al. Non-variceal upper gastrointestinal bleeding and its endoscopic management. Turk J Gastroenterol. 2024;35(8):599-608.
9. González-González JA, Monreal-Robles R, García-Compean D, Paz-Delgadillo J, Wah-Suárez M, Maldonado-Garza HJ, et al. Nonvariceal upper gastrointestinal bleeding in elderly people: Clinical outcomes and prognostic factors. J Dig Dis. 2017;18(4):212-221.
10. Lazăr DC, Ursoniu S, Goldiş A. Predictors of rebleeding and in-hospital mortality in patients with nonvariceal upper digestive bleeding. World J Clin Cases. 2019;7(18):2687-2703.
11. Cagir Y, Durak MB, Yuksel I. Optimal endoscopy timing in elderly patients presenting with acute non-variceal upper gastrointestinal bleeding. BMC Gastroenterol. 2024;24:444.
12. Ahmed A, Stanley AJ. Acute upper gastrointestinal bleeding in the elderly: Aetiology, diagnosis and treatment. Drugs Aging. 2012;29(12):933-940.
13. Anshul, Singh N, Pahuja H Jr, Kumar V, Popli BP, Kumar S, et al. The clinical and endoscopic profiles of patients with upper gastrointestinal bleeding and the role of the Rockall scoring system in predicting adverse outcomes. Cureus. 2023;15(6):e40418.
14. Kumar A, Singh S, Sharma R, Gupta P. Endoscopic profile and clinical outcome of patients presenting with upper gastrointestinal bleeding. Int J Adv Med. 2019;6(3):675-680.
15. Swarnkar PK, Verma K, Srivastava S, Pratap N. Clinical and endoscopic profile

of upper gastrointestinal bleed patients. Indian J Public Health Res Dev. 2024;15(1).

16. Khan F, Gupta AC, Giri R, Kumar V. Spectrum and risk factors for upper gastrointestinal bleed: An experience from multilevel teaching hospital of North India. Int J Adv Med. 2023;10(6):452-455.