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Scoring Systems Used to Predict Mortality in Patients with Acute Upper Gastrointestinal Bleeding in Emergency Room

Tarek Amin El-Shazly[1], Mohamed El Saeed Ahmed[2], Ahmed Mohamed Abd-Almodaber[3], Ahmed Farouk Ahmed Hussain[4]

Departments of [1]Internal Medicine, Gastroenterology and Hepatology, [2]Critical Care Medicine, [3]General Surgery, [4]Emergency Medicine, Faculty of Medicine- Mansoura University

***Corresponding author:** Ahmed Farouk Ahmed Hussain, **Mobile:** (+20) 01066345224, **E-Mail:** ahmedfarouk1989@yahoo.com

ABSTRACT

Background: Upper gastrointestinal bleeding (UGIB) is defined as hemorrhage that involves the mouth to the duodenum proximal to the ligament of Treitz. Upper gastrointestinal bleeding (UGIB) is a major public health problem, its prevalence being around 150 per 100,000 adults per year.

Objective: The aim of this study was to predict mortality in patients with acute upper gastrointestinal bleeding in the emergency room using AIMS65 and Glasgow-Blatchford scoring systems and to assess which scoring system (Blatchford or AIMS65) is more accurate in predicting mortality in AUGIB.

Patients and methods: This was a retrospective cohort study that was conducted at Emergency Department, Faculty of Medicine, Mansoura University. The study was carried out on records of acute upper GIT bleeding patients. We enrolled in this study a total of 362 patients who matched with our inclusion criteria. The mean age was 55.21 years, 61.6% were males and the mean BMI was 25.47 kg/m^2.

Results: Blatchford score at cut off ≥ 13 and AIMS65 at ≥ 3 are valid in the prediction of mortality in patients with acute upper gastrointestinal bleeding in emergency room. AIMS65 ≥ 3 was more accurate (sensitivity of 77.78% and specificity of 84.88%) than Blatchford score (sensitivity of 55.56% and specificity of 71.51%) in the prediction of mortality in patients with acute upper gastrointestinal bleeding in emergency room.

Conclusion: AIMS65 score was superior to Blatchford score in prediction of mortality in patients with acute upper gastrointestinal bleeding in emergency room. GIT cancer, re-bleeding and increase INR value are independent predictors of mortality in patients with acute upper gastrointestinal bleeding in emergency room.

Keywords: Upper gastrointestinal bleeding, AIMS65 score, Blatchford score, Emergency room.

INTRODUCTION

Acute upper gastrointestinal bleeding (AUGIB) is common, costly, potentially life-threatening medical emergency, requires prompt assessment and aggressive medical management. Significant AUGIB is often caused by hemorrhage from varices, ulcers, Mallory-Weiss tears and neoplasms. Elderly patients and those with chronic medical diseases as liver cell failure, chronic renal failure and ischemic heart disease withstand AUGIB less well than younger, fitter patients, and have a higher risk of death **(1).**

Upper gastrointestinal bleeding is one of the most common gastrointestinal emergencies, with an average mortality rate of 10%. Despite advances in the diagnosis and management of UGIB, the mortality rate has not changed significantly in the last 50 years **(2).**

Multiple scoring systems have been developed to predict the outcomes of these patients. The most common one, designed to predict in-hospital death, is the Rockall score (RS), application of which in clinical practice is complex because it includes many variables. The search for a pre-endoscopic clinically applicable score to predict high and low risk patients has led to the development of other scores, such as the Glasgow–Blatchford score (GBS) **(3),** and the AIMS65 score **(4).**

The Glasgow-Blatchford score is used for predicting patient mortality, and in identifying patients with low-risk AUGIB requiring no intervention. This scale allows a risk assessment of patients with AUGIB according to a number of clinical and laboratory variables, requiring no prior upper GI endoscopy procedure **(5).**

AIMS65 (Albumin, INR, mental status, systolic bl. Pressure and age above 65) was found to be a simple, accurate risk score to predict in-hospital mortality, length of hospital stay, and health care costs in patients with acute UGIB. This score is better than commonly used pre-endoscopy scores and as well as the post-endoscopy Rockall score in predicting in-hospital mortality **(6).**

Aim of the study was prediction of mortality in patients with acute upper gastrointestinal bleeding in the emergency room using AIMS56 and Glasgow–Blatchford scoring systems and to assess which scoring system (AIMS65 or Blatchford) is more accurate in predicting mortality in AUGIB.

PATIENTS AND METHODS

This was a retrospective cohort study that was conducted at Emergency Department, Faculty of Medicine, Mansoura University. The study was carried out on records of acute upper GIT bleeding patients. We enrolled in this study a total of 362 cases who matched with our inclusion criteria. The mean age was 55.21 years ranging from 42-66 years, 61.6% were males and the mean BMI was 25.47 ranging from 19.8-32.7 kg/m^2.

The definition of acute AUGIB was based on the presence of at least one of the following three features: hematemesis, melena, and firm clinical evidence and

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laboratory support for acute blood loss from the upper gastrointestinal (UGI) tract. Patients presenting with iron deficiency anemia without evidence of acute upper gastrointestinal bleeding (UGIB) were excluded [7].

Inclusion criteria:

All patient records from January, 2018 to January, 2021 were selected according to the following inclusion criteria:

1. Adult patients (18 years old or more).
2. Patients presented with signs and symptoms of acute upper gastrointestinal bleeding (i.e., hematemesis, "coffee-ground" vomitus, melena, and/or hematochezia).
3. Both genders.

Exclusion criteria:

1. Patients with incomplete records.
2. Patients who were transferred from another hospital.
3. Patients whose bleeding was not of upper gastrointestinal origin.

A-Protocol of management:

According to the standard protocol of our ED, all patients presenting with suspected acute UGIB should be given a PPI (proton pump inhibitor). Typically, a high-dose bolus followed by continuous infusion is recommended. In addition, for patients at risk for variceal hemorrhage, somatostatin should be given (250 µg bolus followed by an infusion of 250 µg/h), which can subsequently be discontinued if the bleeding source is demonstrated to be non-variceal. The initial treatment of unstable UGIB in our ED included resuscitation with crystalloid and blood transfusions, intravenous vasopressin, and prompt consultation with a specialist. Emergency endoscopy examination was performed for patients who developed persistent or recurring bleeding. Patients without evidence of active bleeding and in stable condition were transferred to the observation ward and might be discharged if there was no more gastrointestinal bleeding.

All patients were subjected to the following:

1-Full history taking: Data were collected from records with stress on patient's history and family history of same cases, BMI and medical co-morbidities including liver disease, DM, cardiac disease, renal disease and GIT cancer.

2- Vital signs assessments including (heart rate, systolic and diastolic blood pressure).

3- General Examination: Complete full physical examination was checked from records of patients with acute upper GIT bleeding.

4- Laboratory investigations: CBC, liver function tests, kidney function tests, INR, PTT, and CRP.

5- Endoscope findings: were collected.

6- Patients were assessed for Glasgow-Blatchford scoring system by: Blood Urea (mmol/l), hemoglobin (g/dl), systolic blood pressure (mmHg), presentation with syncope, history of cardiac disease by echocardiography evidence, history of hepatic disease with either chronic or acute liver disease, or presentation with melena [3].

7- Patients were assessed for AIMS65 for each patient before treatment by: AIMS65 consists of the following components: Albumin level (A), international normalized ratio (INR), altered mental status (M), systolic blood pressure (S), and age > 65 years (65) [4].

8- Outcomes: including re-bleeding, blood transfusion requirements, length of hospital stay and in-hospital mortality.

Ethical consent:

An approval of the study was obtained from Mansoura University Academic and Ethical Committee. Every patient signed an informed written consent for acceptance of participation in the study. This work has been carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki) for studies involving humans.

Statistical analysis

All data were collected, tabulated and statistically analyzed using the IBM SPSS (Statistical Package for the social sciences) statistics for windows, version 23.0 (IBM Corp., Armonk, NY: USA). Quantitative data were expressed as the mean ± SD & median (range), and qualitative data were expressed as absolute frequencies (number) & relative frequencies (percentage). Continuous data were checked for normality by using Shapiro Walk test. Independent samples Student's t-test was used to compare between two groups of normally distributed variables while Mann Whitney U test was used for non-normally distributed variables. Percent of categorical variables were compared using Chi-square test or Fisher's exact test when appropriate. All tests were two sided. P-value $\leq$ 0.05 was considered statistically significant (S), p-value $\leq$ 0.001 was considered highly statistically significant (HS), and p-value > 0.05 was considered statistically insignificant (NS). Receiver operating characteristic (ROC) curve analyses were performed to determine the best cut-off value of AIMS65, and Blatchford score and logistic regression analysis was performed to identify the independent predictors of mortality in patients with acute upper gastrointestinal bleeding in emergency room.

RESULTS

The mean age of all patients was 55.21 ± 10.04 years ranging from 42-66 years. The studied patients with acute upper gastrointestinal bleeding in emergency room were 223 males (61.6%), and139 females (38.4%) (Table 1).

Table (1): Demographic data of studied patients (n.362)

Variables	N.	Percent
Age (years)		
< 55 years	176	48.6
≥ 55years	186	51.4
Mean ± SD **Median (Range)**	55.21 ± 10.04 58 (42-66)	
Sex	.	.
Males	223	61.6
Females	139	38.4

The mean Blatchford score of all patients was 9.92 ± 3.35 ranging from (0-15), while the mean of AIMS65 was 1.44 ± 1.28 ranging from (0- 5). More than one half (56.63%) of patients needed blood transfusion and case fatality rate was 4.97% (Table 2 & Figure 1).

Table (2): Scoring system of prediction of mortality, intervention requirements and prognosis of the study patients (n.362)

	Mean ±SD	Median(range)
Blatchford score	9.92 ± 3.35	10(0-15)
AIMS65	1.44 ± 1.28	1(0-5)
Intervention requirements:		
Blood transfusion N (%)	205	56.63
Prognosis:		
Mortality N (%)	18	4.97

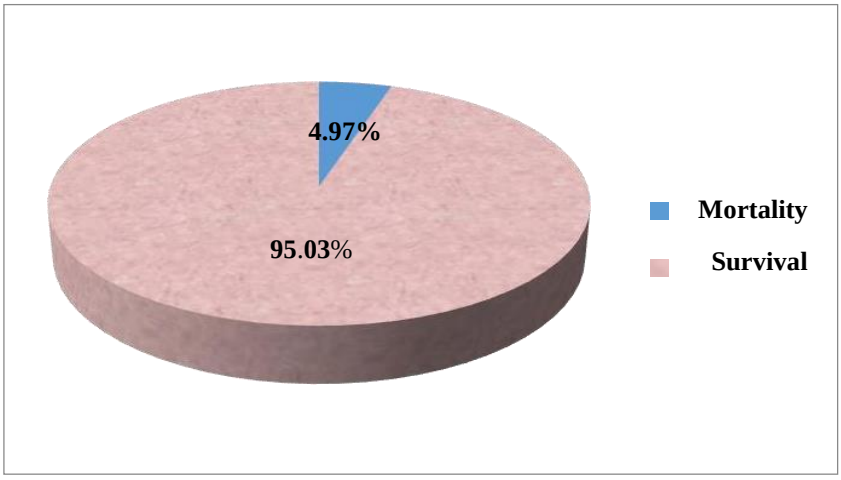

Figure (1): Case fatality rate was 4.97% for patients with acute upper gastrointestinal bleeding in emergency room.

Table (3) showed statistically significant relation between prognosis of studied patients and their age (p=0.022). It is obvious that ≥ 55 years usually had bad prognosis.

Table (3): Relation between prognosis of studied patients and their demographic characteristics

	Prognosis of patients with acute upper gastrointestinal bleeding in emergency room				n.	χ 2	p-value
	Died		Survival				
	No.	%	No.	%			
Age							
< 55 years	4	2.3	172	97.7	176	5.3	0.022
≥ 55years	14	7.5	172	92.5	186		(S)
Sex							
Males	11	4.9	212	95.1	223	0.002	0.96
Females	7	5.0	132	95.0	139		

χ^2 Chi square test (S) = significant p<0.05

Table (4) showed statistically significant relation between prognosis of studied patients and liver disease, GIT cancer (p=0.0001) and re-bleeding (p=0.002). It is obvious that patients who had liver disease, cardiac disease, GIT cancer and rebleeding usually were exposed to bad outcome.

Table (4): Relation between prognosis of studied patients and associated risk factors

Variables	Prognosis of patients with acute upper gastrointestinal bleeding in emergency room				n.	χ^2	p-value
	Died n.18		Survival n.344				
	No.	%	No.	%			
Liver disease							
Yes	15	10.0	135	90.0	150	13.7	0.0001 (HS)
No	3	1.4	209	98.6	212		
Cardiac disease							
Yes	0	0.0	78	100.0	78	f	0.017 (S)
No	18	6.3	266	93.7	284		
Renal disease							
Yes	5	11.4	39	88.6	44	f	0.105
No	14	4.4	304	95.6	318		
GIT cancer							
Yes	3	12.5	21	87.5	24	f	0.0001 (HS)
No	15	4.4	323	95.6	338		
Diabetes mellitus							
Yes	7	7.3	89	92.7	96	f	0.27
No	11	4.1	255	95.9	266		
Rebleeding							
Yes	6	20.0	24	80.0	30	f	0.002 (S)
No	12	3.6	320	96.4	332		

χ^2 Chi square test f=Fisher exact test (S)=significant $p < 0.05$ (HS)= highly significant $p < 0.001$.

Table (5) showed that there was statistically significant higher Blatchford score and AIMS65 score for bad prognosis (mortality) patients compared to survival patients p=0.0001.

Table (5): Prognosis score of studied patients

	Prognosis of patients with acute upper gastrointestinal bleeding in emergency room		u	p-value
	Mortality (n. 18)	Survival (n.344)		
Blatchford score				
Mean ± SD	13.22 ± 1.31	9.74 ± 3.34	4.792	**0.0001 (HS)**
Median (range)	14(11-15)	10(0-15)		
AIMS65				
Mean ± SD	3.44 ± 0.92	1.34 ± 1.22	5.877	**0.0001 (HS)**
Median (range)	4(2-5)	1(0-5)		

U= Mann-Whitney U (HS) = highly significant $p < 0.001$

Table (6) showed, statistically significant relation between prognosis of studied patients and blood transfusion (p = 0.0001). It is noticeable that all died patients, received blood transfusion.

Table (6): Relation between prognosis of studied patients and management

	Prognosis of patients with acute upper gastrointestinal bleeding in emergency room				χ^2	p-value
	Died n.18		Survival n.344			
	No.	%	No.	%		
Blood transfusion Requirements						
Yes	18	100.0	187	54.4	14.5	**0.0001 (HS)**
No	0	.0	157	45.6		

χ^2 Chi square test f = Fisher exact test (NS) = non-significant significant = $p \leq 0.05$ (HS) = highly significant = $p < 0.001$

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able (7) showed statistically insignificant difference of hospital stay duration among studied patients regard their outcome.

Table (7): Hospital stay of studied patients

	Prognosis of patients with acute upper gastrointestinal bleeding in emergency room		u	p-value
	Mortality (n. 18)	Survival (n.344)		
Hospital stay				
Mean ± SD	4.17±1.58	4.39±1.43	0.624	**0.533**
Median(range)	4(2-7)	4(2-7)		

U= Mann-Whitney U, (NS) = non-significant

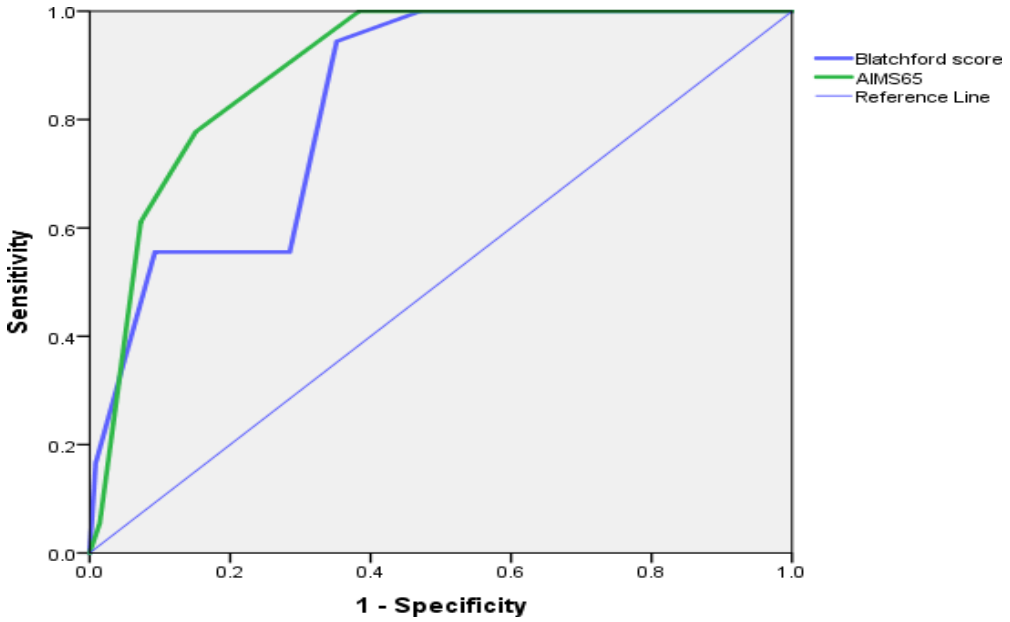

Figure (2): ROC Curve to detect the best cut-off value of Blatchford score and AIMS65 in the prediction of mortality in patients with acute upper gastrointestinal bleeding in emergency room.

Area under curve (AUC) was 0. 833 and 0.897 of Blatchford score and AIMS65 respectively. So, Blatchford score and AIMS65 were good prognostic score to discriminate mortality in patients with acute upper gastrointestinal bleeding in emergency room.

Blatchford score at cut off ≥ 13, AIMS65 ≥ 3 are valid in in the prediction of mortality in patients with acute upper gastrointestinal bleeding in emergency room. AIMS65 ≥ 3 is more accurate (sensitivity of 77.78% and specificity of 84.88%) than Blatchford score (sensitivity of 55.56% and specificity of 71.51%) in the prediction of mortality in patients with acute upper gastrointestinal bleeding in emergency room (Table 8).

Table (8): Validity of Blatchford score and AIMS65 score in the prediction of mortality in patients with acute upper gastrointestinal bleeding in emergency room.

Cut off	Sensitivity	specificity	PPV	NPV	Accuracy	AUC
Blatchford score ≥ 13	55.56%	71.51%	9.26%	96.85%	70.72%	0.833
AIMS65≥ 3	77.78%	84.88%	21.21%	98.65%	84.53%	0.897

Table (9) showed significant independent predictors for mortality in patients with acute upper gastrointestinal bleeding in emergency room, where ≥ 65 years, liver disease, GIT cancer and rebleeding are susceptible to bad outcome (mortality), 3.5, 7.741, 9.056, 4.908 and 6.667 times respectively more than survival patients. Logistic regression analysis identified that patients at AIMS65 ≥ 3, had odds ratio (OR) of 19.654, and Blatchford score ≥ 13 (3.138) times susceptible to bad outcome (mortality), more than survival patients. Liver function mainly T. Bil., AST, ALT, also INR increased significantly among bad outcome (mortality) patients.

Table (9): Univariate logistic regression analysis to assess independent predictors for mortality in patients with acute upper gastrointestinal bleeding in emergency room

Variables	Sig.	Exp(B)	95% C.I. for EXP(B)	
			Lower	Upper
Age ≥ 55	0.030	3.5	1.129	10.847
Liver disease	0.001	7.741	2.199	27.244
GIT cancer	0.0001	9.056	3.048	26.902
Rebleeding	0.0001	6.667	2.300	19.323
AIMS65 ≥ 3	0.0001	19.654	6.225	62.051
Blatchford score≥13	0.019	3.138	1.203	8.184
T. Bil.	0.013	1.657	1.111	2.471
AST	0.003	1.013	1.004	1.021
ALT	0.005	1.015	1.005	1.025
INR	0.0001	5.176	2.668	10.045

Exp (β) the odds ratios for the predictors CI=Confidence interval

Multivariate logistic regression for predicting variables for mortality in patients with acute upper gastrointestinal bleeding in emergency room were GIT cancer, rebleeding and increase INR value (Table 10).

Table (10): Multivariate logistic regression analysis to assess independent predictors of mortality in patients with acute upper gastrointestinal bleeding in emergency room

	Sig.	Exp(B)	95% C.I. for EXP(B)	
			Lower	Upper
GIT cancer	0.0001	32.006	6.801	150.616
Rebleeding	0.001	27.855	4.042	191.969
INR	0.007	16.240	2.133	123.662

Exp (β) the odds ratios for the predictors CI=Confidence interval

DISCUSSION

Our results demonstrated that the mean age was 55.21 years ranging from 42 to 66. 61.6% were males and the mean BMI was 25.47 ranging from 19.8 to 32. This comes in agreement with **Hajavi *et al.*** [8] who reported that 153 patients were enrolled with mean age of 56.72 years with UGIB. Most patients were males. In addition, **Zhong *et al.*** [9] in their study that included 320 patients found that the median age was 63 years (ranging from 42 to 79 years). Of these patients, 61.9% were males. **Shafaghi *et al.*** [10] reported that 563 patients were included in the study with a mean age of 60.53 years (ranging from 18 to 94). 61.3% of patients were male.

In the present study, the mean Blatchford score of all patients was 9.92 ± 3.35 ranging from 0-15, while the mean of AIMS65 was 1.44 ± 1.28 ranging from (0- 5). To some of extent this comes in agreement with **Hajavi *et al.*** [8] who found that mean GBS and AIMS65 scores were 7.64 ± 4.14 and 0.96 ± 0.89, respectively.

In the current study, more than one half (56.63%) of patients needed blood transfusion. This came in agreement with **Hajavi *et al.*** [8] who found that 44.4% of patients needed for transfusion. In addition**, Fouad and El Saied** [11] found that blood transfusion was required in 60.8% of patients. Moreover, **Shafaghi *et al.*** [10] said that 69.4% of patients needed blood transfusion. In contrast with our study**, Tang *et al.*** [12] found that 17.0% of patients received transfusion. This difference may be due to different sample size, protocol of treatment and variceal bleeding as the most common cause of UGIB in our study needed blood transfusion more frequently than other cause.

In the current study, the mortality rate was 4.97% for patients with acute uppergastrointestinal bleeding in emergency room. In agreement with our study, **Hajavi *et al.*** [8] found that eight patients (5.2%) died during the hospital stay. Also, **Tang *et al.*** [12] found that in-hospital mortality was 4.7%. **Shafaghi *et al.*** [10] reported that the overall inpatient mortality was 3%. Furthermore, the study of **Fouad and El Saied** [11] included 74 patients, 5 patients died while in the hospital (6.76%), four of them had history of CLD, and only one patient had endoscopy and band ligation but died after 4 days of admission, owing to hepatic encephalopathy and hepatic failure. All died patients had disturbed conscious level. By contrast, large observational cohort studies from Europe suggest higher fatality rates of around 10% [7, 13]**.** The reason for these differences is unknown but might be partly related to reliance on coding in database studies and differences in practice, such as low risk patients being more often managed in outpatient settings in Europe. **Elsebaey *et al.*** [14] reported that in-hospital mortality rate was 8.74% that was higher than in our study because different inclusion and exclusion criteria of their study with their patients older than our patients.

In the present study, there was statistically significant relation between prognosisof studied patients and their age. It was obvious that ≥ 55 years usually had

bad prognosis. This comes in agreement with **Elsebaey *et al.*** [14] and **Thomopoulos *et al.*** [15] who found that advanced age is considered an important risk factor for mortality in patients with acute UGIB.

In the current study, there was statistically significant relation between prognosis of studied patients and liver disease, GIT cancer, Rebleeding. It is obvious that patients who had liver disease, GIT cancer, cardiac disease, and rebleeding usually exposed to bad outcome. This comes in agreement with **Fouad and El Saied** [11] who found that no history of chronic liver disease was detected in the low-risk patients. In disagreement with our study, **Kumar *et al.*** [16] in a retrospective cohort of 361 patients, found that patients who underwent urgent endoscopy had a greater than five-fold increased risk of adverse outcome (death, inpatient re-bleeding, surgery or radiological intervention or repeated endoscopic therapy). **Laine *et al.*** [17] reported that bad prognosis in patients was for severe bleeding caused by NSAIDs and H. pylori.

In the present study, there was statistically significant lower value of TLC and albumin, for bad prognosis patients. However, there was statistically significant higher value of T. Bil., AST, ALT, INR, and Urea for bad prognosis patients. This comes in agreement with **Bae *et al.*** [18] who found that the mortality group had significantly higher total bilirubin, AST, ALT, potassium and PT (INR)levels.

In the present study, there was statistically significant higher Blatchford score and AIMS65 score for died patients compared to survival patients. This comes in agreement with **Hajavi *et al.*** [8] who found that the AIMS65and GBS scores were significantly higher in cases with mortality. Also, **Tang *et al.*** [12] found that a significant trend in mortality was seen with each increasing score.

In the current study, there was statistically significant relation between prognosis of studied patients and blood transfusion. It is noticeable that all died patients, received blood transfusion. This comes in agreement with **Tang *et al.*** [12] who found that patients identified to be at high risk of death may be prioritized for blood transfusion. In contrast with our study, **Horibe *et al.*** [19] found that of 311 patients whoneeded a blood transfusion, only 13 patients died due to all-cause mortality (4.2%). This difference may be because variceal bleeding as the most common etiology of acute UGIB in our study came with significant bleeding more than other causes of UGIB.

In the present study, the results demonstrated that Blatchford score at cut off ≥ 13, AIMS65 ≥ 3 were valid in the prediction of mortality in patients with acute upper gastrointestinal bleeding in emergency room. AIMS65 ≥ 3 (sensitivity of 77.78% and specificity of 84.88%) was more accurate than Blatchford score (sensitivity of 55.56% and specificity of 71.51%) in the prediction of mortality in patients with acute upper gastrointestinal bleeding in emergency room. This comes in agreement with **Tang *et al.*** [12] who found that receiver operating characteristic curves yielded an AUC of 0.907 (95% CI 0.874 - 0.934) for the AIMS65 score in predicting 30-day mortality. The Blatchford score also showed accuracy for predicting mortality of 0.870 (CI 0.833-0.902).

According to the area under the curve in ROC analysis, predicted mortality rates of AIMS65 and Blatchford results were found to be statistically significant for estimation of mortality ($P < 0.001$). The cutoff values that maximized the sum of the sensitivity and specificity for predicting mortality in each score were generated from the receiver-operating characteristic curves, and were selected for further analysis. The cutoff for the AIMS65 score was determined as 2.5. At this value, the sensitivity was 70.73% and specificity was 95.76%. The cutoff for the Blatchford score was determined as 11.5. The sensitivity was 87.80% and the specificity was 76.27% of this value. Also, **Hajavi *et al.*** [8] found that on ROC curves, AIMS65 and GBS were able to predict in-hospital mortality with AUC of 0.947 and 0.80, respectively ($p < 0.001$). Sensitivity and specificity of the AIMS65 > 2 inpredicting in-hospital mortality were 87.5% and 100%, respectively and for GBS >12 were 62.50% and 92.41%, respectively. AIMS65 had significantly highersensitivity and specificity. **El-Mohr *et al.*** [20] found that AMS65 score had highest diagnostic performance and characteristics in prediction of death in hospital, followed by Blatchford. **Shafaghi *et al.*** [10] said that in predicting inpatient mortality, AIMS65 had enough accuracy with AUROC of 0.67, respectively. While in disagreement withour study, they found that GBS acted poorly with AUROC of 0.58. The cutoff point that maximized the sum of sensitivity and specificity was 2 for AIMS65 (sensitivity of 47.1 and specificity of 79.5) and 8 for GBS (sensitivity of 76.5 and specificity of 39.7). In disagreement of our study **Stanley *et al.*** [21] found that GBS has high accuracy in predicting those who need for intervention or death in patients with upper gastrointestinal bleeding (AUROC=0.86) compared to AIMS65 Score (0.68).

In the present study, we found that the predictors for mortality in patients with acute upper gastrointestinal bleeding in emergency room were GIT cancer, re-bleeding and increase INR value. This comes in agreement with **Akbar *et al.*** [22] who found that re-bleeding and INR ≥ 1.5 has been shown to be independently associated with inhospital mortality in upper GI bleeding. In disagreement with our study, **Elsebaey *et al.*** [14] reported that increasing age, hemodynamic instability at presentation, co-morbidities (especially liver cirrhosis associated with other co-morbidity) and failure to control bleeding were the predictors of in-hospital mortality. This difference may be due to different inclusion and exclusion criteria of their study. They included patients aged ≥ 60 years presented with acute UGIB while patients aged < 60 years were excluded from their study with no other exclusion criteria.

CONCLUSION

We concluded that AIMS65 score was superior to Blatchford score in prediction of mortality in patients with acute upper gastrointestinal bleeding in emergency room. GIT cancer, re-bleeding and increase INR value are independent predictors of mortality in patients with acute upper gastrointestinal bleeding in emergency room.

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