ORIGINAL ARTICLE

Prediction of adverse outcomes using non-endoscopic scoring systems in patients over 80 years of age who present with the upper gastrointestinal bleeding in the emergency department

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ABSTRACT

BACKGROUND: The emergency department (ED) admission rate for elderly patients with non-variceal upper gastrointestinal bleeding (UGIB) is increasing. The AIMS65 and Glasgow-Blatchford score (GBS) are two distinct scoring systems proposed to predict in-hospital and post-discharge mortality, length of stay (LOS), and health-related costs in these patients. The objective of the present study is to evaluate the accuracy of these scoring systems, in conjunction with the Charlson comorbidity index (CCI), to predict 30-day mortality and LOS in UGIB patients who are 80 years of age or older

METHODS: A retrospective analysis was undertaken of 182 patients with non-variceal UGIB who were admitted to the ED of Canakkale Onsekiz Mart University Hospital. The AIMS65, GBS, and CCI scores were calculated and adverse patient outcomes were assessed.

RESULTS: The mean age of patients was 85.59±4.33 years, and 90 (49.5%) of the patients were males. The AIMS65 was superior to the GBS (area under the receiver operating characteristic curve [AUROC] 0.877 vs. 0.695, respectively) and CCI (AUROC 0.877 vs. 0.526, respectively) in predicting the 30-day mortality. All three scores performed poorly in predicting the LOS in hospital. The cutoff threshold that maximized sensitivity and specificity for mortality was three for the AIMS65 score (sensitivity, 0.87; specificity, 0.80; negative predictive values [NPV], 0.977; positive predictive values [PPV], 0.392), 14 for GBS (sensitivity, 0.83; specificity, 0.51; NPV, 0.923; PPV, 0.367), and 5 for CCI (sensitivity, 0.91; specificity, 0.22; NPV, 0.946; PPV, 0.145).

CONCLUSION: The AIMS65 is a simple, accurate, and non-endoscopic scoring system that can be performed easily in ED settings. It is superior to GBS and CCI in predicting 30-day mortality in elderly patients with UGIB.

Keywords: AIMS65; Charlson comorbidity index; gastrointestinal bleeding; Glasgow-Blatchford score; oldest-old.

INTRODUCTION

Non-variceal upper gastrointestinal bleeding (UGIB) is a potentially life-threatening medical emergency indicating bleeding from a source proximal to the ligament of Treitz. It is one of the most common reasons for emergency department (ED) visits with an incidence of approximately 100 cases per 100,000 inpatient hospitalizations, and is related to significant

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morbidity and mortality.[1,2] Several risk factors have been found to influence the adverse outcomes related to UGIB, of which age, accompanying medical comorbidities, vital signs at admission, endoscopic diagnosis, and initial hemoglobin values are the most important.[3,4]

In recent years, the number of elderly UGIB patients admitted to EDs has substantially increased, mostly due to increased life expectancy and prevalent consumption of nonsteroidal anti-inflammatory drugs (NSAIDs) and anticoagulants/fibrinolytic agents for the treatment of cardiovascular diseases.[5] Moreover, increased age itself is considered as a significant risk factor for associated disease conditions including cardiopulmonary, hepatic, and renal diseases, which means UGIB in the elderly population will likely present with more complicated adverse outcomes. For this reason, it is crucial for the clinician to identify high risk elderly patients who are admit to the ED with a diagnosis of UGIB.

Several scoring systems have been proposed for risk stratification and prediction of adverse outcomes in UGIB, such as the AIMS65 score,[6] the Glasgow-Blatchford score (GBS),[7] the Rockall score,[8] and the ALBI score.[9] In this context, the Rockall, GBS and AIMS65 are the most widely used scoring systems that were validated to predict the need for treatment and also to determine adverse outcomes including inpatient mortality in patients with UGIB.[10,11] In comparison to the Rockall scoring system, the AIMS65 and GBS score calculations do not require an endoscopic examination and both can be measured by using routinely available parameters. Based on the fact that advanced age is a risk factor for procedure-related adverse outcomes, even in patients with UGIB, the AIMS65 and GBS seem to be more appropriate in clinical practice, especially in ED settings, for this particular patient population. Thus, early recognition of elderly UGIB patients who are at increased risk for adverse outcomes can result in timely medical and endoscopic management with a consequence of diminished morbidity and mortality. Furthermore, recognizing elderly patients with UGIB who are at minimum risk for adverse outcomes means they can be discharged earlier and in safer conditions, leading to a reduction in health, social, and economic costs.[12]

The Charlson comorbidity index (CCI) is a reliable method of measuring comorbidity based on a history of concomitant diseases such as tumoral disorders, renal failure, cerebrovascular disease, coronary artery disease, peripheral vascular disease, liver disease, renal failure hemiplegia, diabetes mellitus, ulcer disease, and acquired immunodeficiency syndrome (AIDS).[13–16] It is a method of predicting mortality by classifying or weighting these comorbid disease conditions and has been utilized by healthcare providers to estimate the severity of the disease and case mix. The CCI is generally used to predict short-term outcomes and has been validated in a variety of clinical conditions.[17] Unfortunately, there are few reports in the literature concerning the predictive importance of CCI in UGIB patients.[18]

In the present study, we aimed to compare the performance of AIMS65 and GBS risk stratification systems in conjunction with CCI in predicting composite clinical endpoints including length of stay (LOS), blood transfusion, and 30-day mortality in elderly non-variceal UGIB patients aged 80 or older.

MATERIALS AND METHODS

Study Group

This retrospective study was performed in the ED of a tertiary care university hospital. All research reviews were conducted under protocols approved by the local Institutional Ethics Board of Canakkale Onsekiz Mart University (COMU). Patients over the age of 80 who were admitted to our institution between January 2016 and December 2019 with a diagnosis of non-variceal UGIB were identified using International Classification of Disease 10th Edition codes. Exclusion criteria were: Incomplete risk stratification score data required for calculation, history of liver cirrhosis, UGIB caused from variceal bleeding, bleeding from lower gastrointestinal tract, and if GIB was not the presenting symptom to the ED.

Data Collection and Measures

Clinical, laboratory, and endoscopic data (if available) were collected from the COMU Hospital Information and Management System (HIMS). Database access was granted by the management of the COMU Medical Center. The data gathered from the hospital database allowed us to study the following parameters: Age, gender, date and hour of presenting to the hospital, LOS, variables related to mortality, accompanying diseases, parameters related to CCI, complete blood cell counts, laboratory parameters including blood urea nitrogen (BUN), alanine aminotransferase (ALT), aspartate aminotransferase (AST) international normalized ratio (INR), albumin, systolic and diastolic blood pressure, pulse rate, mental status, presence of melena, hematemesis or syncope, medication use, and medical history. Altered mental status was defined as a Glasgow Coma Scale score of <14 or lack of orientation to time, place and person. The patients' outcome on the 30th day was identified from HIMS, online death registries or, in some cases, by telephone interviews.

AIMS65 and Glasgow-Blatchford Risk Score

The AIMS65 risk stratification score was derived from five clinical and laboratory variables as described by Saltzman et al.[6] and the GBS score was calculated from eight clinical or laboratory variables as defined by Blatchford et al.[7] (Table 1).

The CCI

The CCI was calculated as suggested by Charlson et al.[13] For each patient, we retrieved all medical records to identify comorbidities. Comorbidities were defined as pre-existing disease and medical conditions present at the time

Table 1. Parameters regarding to AIMS65, GBS and CCI

AIMS65 score	
Risk factor	**Score**
Albumin <3.0 mg/dl	1
INR >1.5	1
Altered mental status	1
SBP ≤90 mmHg	1
Age >65 year	1

CCI	
Condition	**Weight**
Myocardial infarction	1
Congestive heart failure	1
Peripheral vascular disease	1
Cerebrovascular disease	1
Connective tissue damage	1
Ulcer disease	1
Liver disease, mild	1
DM	1
Hemiplegia	2
Renal disease, moderate or severe	2
DM with end organ damage	2
Any malignancy	2
Leukemia	2
Malignant lymphoma	2
Liver disease, moderate or severe	3
Metastatic solid malignancy	6
AIDS	6

GBS	
Risk factor	**Score**
BUN, mg/dl	2
≥18.2 to <22.4	3
≥22.4 to <28.0	4
≥28.0 to <70.0	6
≥70.0	
Hemoglobin, men g/dl	
≥12.0 to <13.0	1
≥10.0 to <12.0	3
<10.0	6
Hemoglobin, women g/dl	
≥10.0 to <12.0	1
<10.0	6
SBP, mmHg	
100–109	1
90–99	2
<90	3
Other markers	
Heart rate ≥100 bpm	1
Melena	1
Syncope	2
Hepatic diseases	2
Heart failure	2

DM: Diabetes mellitus; AIDS: Acquired immunodeficiency syndrome; BUN: Blood urea nitrogen; INR: International normalized ratio: SBP: Systolic blood pressure; bpm: Beats per minute; CCI: Charlson Comorbidity Index; GBS: Glaskow Blatchford score.

of ED admission. According to this classification, comorbid conditions were evaluated as having different weights. The total score was then calculated by adding the weights (Table 1). Final CCI value is then generated by adding 1 point to the CCI score for each decade of age over 40 years. In the present study all of our patients were over 80 years, for this reason we added 4 points for each patient at the beginning of the study.

Statistical Analysis

All statistical analysis were performed using SPSS for Windows Version 19.0 software (Armonk, NY: IBM Corp. USA). Categorical variables were expressed as numbers and percentages (%), whereas continuous variables were presented as mean±standard deviation and as median and interquartile range (IQR) where appropriate. The Shapiro Wilk test was used to confirm the normality of distribution for continuous variables. Depending on whether the statistical hypotheses were fulfilled or not, the Student's t-test or Mann–Whitney U test was used for comparison of continuous variables between two groups. Odds ratios (95% confidence intervals [CI]) of independent clinical parameters were calculated with univariate logistic regression models for predicting outcome variables: LOS of 5 or more days and 30-day mortality. The diagnostic accuracy of scoring systems was assessed for each outcome variable using empirical receiver operating characteristic analysis. Sensitivity, specificity, area under the receiver operating characteristic curve (AUROC) with 95% CI, positive/negative predictive values (PPV/NPV), and optimal cutoff values were calculated for each scoring system. The optimal cutoff point was determined by maximizing the sum of sensitivity and specificity (Youden's index). A p-value threshold for statistical significance of 0.05 was used for all statistical analyses.

RESULTS

One hundred and eighty-two (Male/Female: 90/92) patients admitted to the ED of COMU Hospital were included in the current study based on inclusion and exclusion criteria. The mean age of the patients was 85.59±4.33 years and 23 (16%) patients died within 30 days of discharge. The median LOS stay was 5 days (IQR, 4–7). The demographic, laboratory, clinical, and endoscopic characteristics with adverse outcomes are presented in Table 2. No endoscopic investigations were performed on 46 (25.3%) patients either because the patient declined the endoscopic procedure, or the treating physician declined the procedure based on the patient's comorbid conditions.

When comparing AUROC for predicting the LOS, AIMS65 (0.561, 95% CI 0.474–0.647) was found to be similar to GBS (0.583, 95% CI 0.489–0.669) and CCI (0.571, 95% CI 0.486–0.657). Comparing AUROC for predicting the primary outcome of in-hospital and post-discharge 30-day mortality revealed that AIMS65 (0.877, 95% CI 0.783–0.971) was superior to GBS (0.695, 95% CI 0.601–0.791) and CCI score (0.526, 95% CI 0.435–0.620). The cutoff threshold that maximized sensitivity and specificity for mortality was 3 for the AIMS65 score (sensitivity, 0.87; specificity, 0.80; NPV, 0.977; PPV, 0.392), 14 for GBS (sensitivity, 0.83; specificity, 0.51; NPV, 0.923; PPV, 0.367), and 5 for CCI (sensitivity, 0.91; specificity, 0.22; NPV, 0.946; PPV, 0.145) (Table 3). Figure 1 depicts the empirical ROC curves for risk stratification scores as predictors of LOS and mortality. To determine the severity of these associations, a univariate logistic regression analysis of study variables was performed. The AIMS65 <3 group was used as the reference group for this logistic regression analysis. The 30-day mortality rates were found to be 27.52 (95% CI 7.68–98.54) times higher in patients with an AIM65 score of 3 or higher. A specific reference group for GBS <14 and CCI score <5 was not found to be significantly associated with 30-day mortality (Table 4). After determining this cutoff level for CCI, AIM65 and GBS scores, univariate logistic regression analysis revealed no significant capacity of these parameters to predict LOS in hospital.

The predictive value of individual demographic and laboratory parameters for mortality and LOS in hospital was also analyzed. Among the study variables, higher BUN, AST, ALT, and lower albumin were found to be significantly related with higher rates of 30- day mortality (Table 5).

Table 2. Baseline and demographic variables of study patients

Variables	Value
Age (years)	85.59±4.33
Male/female, n (%)	90 (49.5)/92 (50.5)
Comorbidity, n (%)	n=182
None	34 (19.2)
Cardiac	77 (42.3)
Neurologic	53 (29.1)
Pulmonary	26 (14.2)
Renal	16 (8.8)
Malignancy	14 (7.7)
Other	57 (31.3)
2 or more	60 (33.0)
Transfusion, n (%)	
Packed RBC	136 (74.7)
Fresh Frozen Plasma	13 (7.1)
Medication, n (%)	
None	58 (31.8)
Anti-platelet	60 (33.0)
Anti-coagulants	36 (19.8)
NSAIDs	20 (11.0)
2 or more	18 (9.9)
Presenting symptoms, n (%)	
Melena	121 (66.5)
Hematemesis	67 (36.8)
Hematochezia	29 (15.9)
Endoscopy, n (%)	
Yes	136 (74.7)
No	46 (25.3)
Endoscopic findings, n (%)	
Esophageal ulcer	26 (10.4)
Duodenal ulcer	42 (23.1)
Erosive gastritis	7 (3.8)
Gastric ulcer	54 (29.7)
Gastritis	45 (24.7)
Other	16 (8.8)
Median length of stay (days)	5 (4–7)
30 days mortality, n (%)	23 (12.6)

NSAIDs: Nonsteroidal anti-inflammatory drugs; RBC: Red blood cell.

DISCUSSION

In this study, we demonstrated that the AIMS65 score could be superior to both GBS and CCI for predicting 30-day mortality in the octogenarian patients with non-variceal UGIB. Nevertheless, no significant association was found between LOS and these scoring systems. We also demonstrated that serum albumin, BUN, ALT, and AST levels were related to 30-day mortality. No simple initial laboratory value was found to be related to prolonged hospital stay.

Non-variceal UGIB is among the common reasons for ED admissions worldwide and is the cause of high rates of morbidity and mortality despite effective medical and endoscopic treatments.[19] This is especially the case for elderly pa-

Table 3. Predictive values of AIM65, GBS, and CCI for predicting LOS and 30-day mortality

	Cut-off	Youden Index	AUC	Sensitivity	Specificity	NPV	PPV
LOS in hospital							
AIMS65	2	0.129	0.561	0.295	0.743	0.216	0.647
GBS	13	0.134	0.583	0.634	0.366	0.588	0.301
CCI	6	0.132	0.571	0.517	0.614	0.443	0.682
30 day mortality							
AIMS65	3	0.679	0.877	0.873	0.805	0.977	0.392
GBS	14	0.350	0.695	0.833	0.516	0.923	0.367
CCI	5	0.051	0.526	0.913	0.221	0.946	0.145

AUC: Area under curve; NPV: Negative predictive values; PPV: Positive predictive values; LOS: Length of stay; AIMS65; GBS: Glasgow-Blatchford score; CCI: Charlson comorbidity index.

tients who represent a vulnerable hemodynamic state and have atypical symptoms with high rates of comorbidities.[20] Therefore, validated and reliable risk stratification systems are required to assess the optimal management of elderly patients with UGIB, which will lead to rapid and accurate patient triage.

Several individual factors, including increased age, comorbid situations, low hemoglobin level, oral anticoagulant and NSAID use, are thought to affect LOS and mortality in UGIB patients.[21,22] Wong et al.[23] reported increased rebleeding rates that resulted in prolonged hospitalization in UGIB patients who had an initial hemoglobin level below 10 g/dl. Oral anticoagulants are also related to prolonged hospitalization due to elevated rates of UGIB.[24] Our study revealed elevated 30-day mortality rates were associated with increased serum BUN, ALT, and AST. Moreover, initial CCI values of non-surviving elderly UGIB patients were higher compared to survivors (6.70±2.16 vs. 5.77±1.63, respectively).

Not unexpectedly, CCI was not found to have any predictive effect on 30-day mortality in our patient cohort. In fact, CCI was first introduced as a predictive parameter of comorbid conditions on 1-year mortality for patients admitted to medical services and its ability to predict survival over 10 years has also been tested and approved.[13] Although, to the best of our knowledge, there is no study in the literature regarding the predictive power of CCI in elderly UGIB patients, this study clearly demonstrates the insignificant role of CCI in predicting 30-day mortality in these patients.

Based on the serious adverse events related to UGIB, it is not surprising to discover that in recent years the risk stratifica-

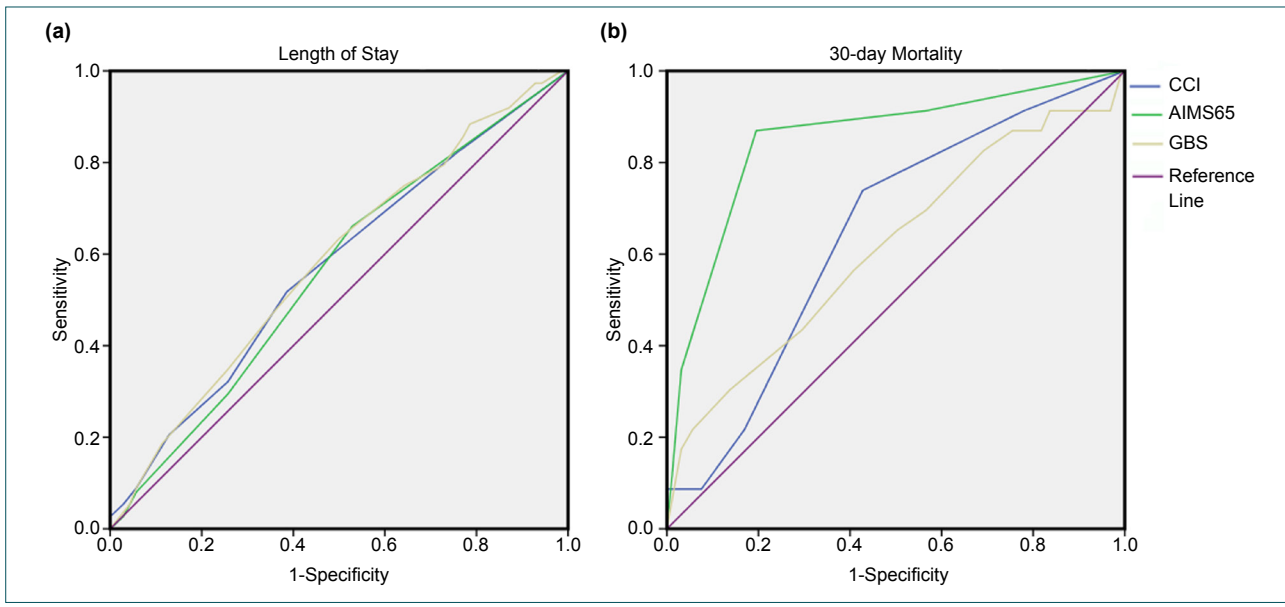

Figure 1. Receiver-operating characteristic curves for AIMS65, Glasgow–Blatchford score, and Charlson Comorbidity Index as predictors of **(a)** length of stay, **(b)** 30-day mortality.

Table 4. univariate Logistic regression analysis of 30-day mortality using specific references of AIMS65, GBS, and CCI

	30 day mortality			p-value
	Yes (n=23)	No (n=159)	OR (95% CI) (%)	
GBS				
<14 Reference	8 (34.8)	79 (49.7)		
≥14	15 (65.2)	80 (50.3)	1.85 (0.74–4.61)	0.186
CCI				
<5 Reference	2 (8.7)	35 (22.0)		
≥5	21 (91.3)	124 (78.0)	2.96 (0.66–13.25)	0.155
AIMS65				
<3 Reference	3 (13.0)	128 (80.5)		
≥3	20 (87.0)	31 (19.5)	27.52 (7.68–98.54)	0.001

GBS: Glasgow-Blatchford score; CCI: Charlson comorbidity index; OR: Odds ratio; CI: Confidence interval.

tion scores were recommended by clinical guidelines for the management of non-variceal UGIB to predict patient prognosis and serious outcomes.[25] In this context, the AIMS65 scoring system is an easy-to-use and effective tool for risk stratification that could accurately predict bleeding outcomes. Recent studies found that AIMS65 had similar power to GBS in predicting death for UGIB patients.[26,27] However, based on AUROC analysis for prediction of 30-day mortality, we demonstrated that except for AIMS65, calculated area under the curves (AUCs) for both GBS and CCI were under 0.8. This finding indicates the superiority of AIMS over GBS and CCI in predicting mortality in elderly patients with UGIB. A recent study by Lu et al.[28] found that the AIMS65 was the most convenient UGIB prognostic score to predict in-hospital mortality when compared with the Rockall score and GBS. Consistent with these findings, Zhao et al.[20] demonstrated that for the elderly patients with UGIB, the AIMS65 score is superior to GBS in predicting inpatient mortality with a significant AUROC of 0.833. However, the authors noted that both AIMS65 and GBS were similar in predicting the composite clinical endpoint. Although the cutoff level that maximized the sum of the sensitivity and the specificity for mortality was found to be 2 for AIMS65 in several studies,[6,28–30] we demonstrated that with an AIMS65 cutoff level of higher than 3, mortality rate increases 27 times in elderly UGIB patients.

Table 5. The characteristics of of study participants according to length of stay and survival

	30-day mortality			LOS in hospital (>5 days)		
	Yes (n=23)	No (n=159)	p-value	Yes (n=112)	No (n=70)	p-value
Age (years)	86.96±5.22	85.40±4.16	0.106	85.84±4.56	85.20±3.93	0.334
Hgb (g/dl)	8.15±2.96	8.61±2.65	0.492	8.41±2.66	8.76±2.73	0.386
Htc (%)	25.05±9.12	26.83±8.32	0.342	26.43±8.38	26.89±8.54	0.723
Plt (mm^3x10^3)	246.98±136.85	255.88±255.14	0.870	262.16±298.37	242.91±107.76	0.605
Urea (mg/dl)	139.69±104.56	87.20±50.24	0.001	99.23±69.226	85.19±47.19	0.106
ALT (U/l)	52.27±116	22.34±51.48	0.035	33.01±79.98	15.12±13.19	0.022
AST (U/l)	70.63±134.15	25.33±47.85	0.002	35.84±82.64	23.96±22.23	0.134
Alb (g/dl)	2.83±0.63	3.35±0.53	0.001	3.24±0.57	3.35±0.57	0.204
INR	1.53±0.70	1.19±2.33	0.418	2.09±2.34	1.68±1.99	0.232
GBS	14.17±4.24	12.86±3.70	0.118	13.46±3.60	12.33±3.98	0.056
AIMS65	3.26±1.05	1.81±0.87	0.001	2.06±1.01	1.87±1.02	0.217
CCI	6.70±2.16	5.77±1.63	0.044	6.06±1.83	5.61±1.53	0.077

LOS: Length of stay; Hgb: Hemoglobin; Hematocrit; Plt: Platelet; ALT: Alanine aminotransferase; AST: Aspartate aminotransferase; Alb: Albumin; INR: International normalized ratio; GBS: Glasgow-Blatchford score; CCI: Charlson comorbidity index.

The Glasgow-Blatchford risk stratification score was originally developed to predict adverse clinical outcomes in the general population presenting to the ED with UGIB.[7] It does not rely on endoscopic finding and is based on simple clinical and laboratory variables, in which a score of 0 identifies low-risk patients who might be suitable for outpatient management. Moreover, GBS can be used to predict either a patient's need for hospital-based intervention (endoscopic treatment, blood transfusion, or surgical operation) or death. A score ≥2 could be used as a decision cut-off for hospital admission in upper GIB.[31] Although we did not determine a cutoff level of GBS to predict hospital admission in this study, a threshold of Blatchford scores more than or equal to 13 (AUC=0.583) could be used as a prediction cutoff for prolonged hospitalization in elderly UGIB patients.

A cutoff value is important for each risk stratification score in predicting adverse clinical outcomes. Unfortunately, cut-off values were mostly different for each of these scoring systems in previous studies. For instance, a recent study by Martínez-Cara et al.[27] found that the ideal cutoff value for predicting mortality among patients with non-variceal UGIB was equal to or higher than 12 for GBS and higher than 1 for AIMS65. A study from Korea demonstrated that the optimum cutoff value to predict death in patients with UGIB was 2 for AIMS65 and 8 for GBS.[10] Another study from China proposed a cutoff level of 2 for AIMS65 and 12 for GBS to predict in-hospital death.[32] Our study demonstrated that the ideal cutoff value to predict 30-day mortality among Turkish elderly non-variceal UGIB patients was 3 for AIMS65, 14 for GBS and 5 for CCI. For this reason, it can be proposed that the ideal cut-off values for each scoring system should be determined separately for each population to maximize the power of identifying high-risk UGIB patients at high risk of death.

We are aware that there are some limitations that should be taken into consideration when interpreting the results of the present study. First, this is a retrospective single-center study, which means data collection and risk stratification score measurements were ascertained through existing HIMS records with a relatively limited number of patients. Second, as noted, we did not perform early endoscopy for every patient because endoscopy in the very elderly patients might incur a significant risk of adverse events, especially with the use of sedative agents. Third, we must note that the outcomes may vary with the availability of experienced endoscopic and critical care capability. Finally, because of the relatively low number of death events, each scoring system used to predict mortality might be less accurate compared with the previous studies.

Conclusion

In summary, we demonstrated the importance of several scoring systems to predict LOS and in-hospital and postdischarge 30-day mortality in elderly patients with UGIB. The AIMS65 score demonstrated superior accuracy compared with GBS and CCI for predicting 30-day mortality. Furthermore, the AIMS65 score is easy to remember and simple to calculate method using routinely available variables in ED settings. Therefore, it is reasonable to suggest the use of AIMS65 scoring system for prediction of severity of UGIB in elderly patients and we think that if the results of the present study are confirmed in further large-scaled prospective trials, the AIMS65 score might become the new standard of care for risk stratification in non-variceal UGIB conditions.

Ethics Committee Approval: This study was approved by the Canakkale Onsekiz Mart University Faculty of Medicine Clinical Research Ethics Committee (Approval number: 2020-08, date: 03.06.2020).

Peer-review: Internally peer-reviewed.

Authorship Contributions: Concept: O.B., G.A.; Design: O.B., G.A.; Supervision: O.B., G.A.; Materials: O.B., G.A., G.Ş., Ü.A.; Data: O.B., G.A., G.Ş., Ü.A.; Analysis: M.D., O.A., Y.B.; Literature search: M.D., O.A., Y.B.; Writing: M.D., O.A., Y.B.; Critical revision: O.B., D.S., G.A., G.Ş., Ü.A., M.D., O.A., Y.B.

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ORİJİNAL ÇALIŞMA - *ÖZ*

Acil serviste üst gastrointestinal kanama ile başvuran 80 yaş üstü hastalarda invaziv olmayan skorlama sistemleri kullanılarak olumsuz sonuçların tahmini

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AMAÇ: Varis dışı üst gastrointestinal (GİS) kanaması olan yaşlı hastalar için acil servis başvuruları artmaktadır. AIMS65 ve Glasgow-Blatchford skoru (GBS), bu hastalarda hastane içi ve taburculuk sonrası mortaliteyi, kalış süresini ve sağlıkla ilgili maliyetleri tahmin etmek için önerilen iki ayrı skorlama sistemidir. Bu çalışmanın amacı, 80 yaşında veya daha büyük olan UGIB hastalarında 30 günlük mortalite ve kalış süresini tahmin etmek için, Charlson komorbidite indeksi (CCI) ile birlikte bu skorlama sistemlerinin etkinliğini değerlendirmektir.

GEREÇ VE YÖNTEM: Çanakkale Onsekiz Mart Üniversitesi Hastanesi Acil Servisi'ne başvuran varis dışı üst GİS kanamalı 182 hasta geriye dönük olarak incelendi. AIMS65, GBS ve CCI skorları hesaplandı ve olumsuz hasta sonuçları değerlendirildi.

BULGULAR: Hastaların ortalama yaşı 85.59±4.33 yıl idi ve hastaların 90'ı (%49.5) erkekti. AIMS65, 30 günlük mortaliteyi tahmin etmede GBS'den (sırasıyla, AUROC 0.695 vs 0.877) ve CCI'dan (sırasıyla, AUROC 0.526 vs 0.877) üstündür. Her üç skor da hastanede kalış süresini tahmin etmede yetersiz performans gösterdi. AIMS65 skoru için mortalite tahmininde, duyarlılık ve özgüllük en üst düzeye çıkaran kesme değeri 3 (duyarlılık, 0.87; özgüllük, 0.80; NPD, 0.977; PPD, 0.392), GBS için 14 (duyarlılık, 0.83; özgüllük, 0.51; NPD, CC23 için 0.923; PPD, 0.367) ve CCI için 5 (duyarlılık, 0.91; özgüllük, 0.22; NPD, 0.946; PPD, 0.145) olarak tespit edilmiştir.

TARTIŞMA: AIMS65, acil servis ayarlarında kolayca yapılabilen basit, doğru ve endoskopik olmayan bir skorlama sistemidir. UGIB'li yaşlı hastalarda 30 günlük mortaliteyi tahmin etmede GBS ve CCI'den daha üstündür.

Anahtar sözcükler: AIMS65; Charlson komorbidite indeksi; gastrointestinal kanama; Glasgow-Blatchford skoru; ileri yaşlı.

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