

BACKGROUND

Acute Non-variceal upper gastrointestinal bleeding (NVUGIB) is a medical emergency and a common reason for GI emergency care. The Glasgow-Blatchford score (GBS) has been developed for risk stratification. Our group has previously reported that GBS has very limited accuracy in Middle East North Africa (MENA) region. **Our aim** was to evaluate whether additional clinical variables improved the accuracy of GBS to predict actual high-risk stigmata or active bleeding during emergency endoscopy and to validate this in a large volume tertiary care setting in the MENA region.

METHOD

- ✓ Retrospective Cohort study
- ✓ Patients over the age of 16
- ✓ Acute Non-Variceal upper GI bleed from January 2020 through September 2021 at a tertiary hospital in the United Arab Emirates.
- ✓ Compare GBS alone to GBS+ with regards to the area under the receiver operating characteristic curve (AUROCC). We examined if patient age, gender, nationality, and other clinical characteristics might improve upon the ability of GBS to detect Forrest I-II classification by fitting several logistic regression models and calculating the AUROCC. *Refer to table 1*

RESULTS

Table 1. Area under the receiver operating characteristic curve for detection of Forrest I-II classification

Model number	Predictor variables	AUROCC (95% CI) ^a
1	GBS+Age+Nationality	0.745 (0.641, 0.837)
2	GBS+Age+DBP	0.738 (0.637, 0.832)
3	Age+DBP	0.738 (0.639, 0.830)
4	Age+Nationality	0.737 (0.635, 0.832)
5	GBS+Age+Gender	0.731 (0.623, 0.832)
6	Age+Gender	0.724 (0.619, 0.827)
7	GBS+Age	0.704 (0.597, 0.806)
8	Age	0.695 (0.594, 0.795)
9	GBS+ DBP	0.648 (0.530, 0.761)
10	GBS+Nationality	0.634 (0.524, 0.741)
11	Nationality	0.630 (0.555, 0.698)
12	GBS+Gender	0.605 (0.495, 0.713)
13	DBP	0.599 (0.471, 0.721)
14	Gender	0.590 (0.521, 0.656)
15	GBS ^b	0.493 (0.366, 0.618)

Abbreviations: AUROCC = area under the receiver operating characteristic curve, CI = confidence interval,

GBS = Glasgow-Blatchford Score, DBP = diastolic blood pressure.

^a AUROCC was estimated using each patient's predicted probability of Forrest I-II classification from each logistic regression model with the observed occurrence of Forrest I-II classification for the given patient. Forrest I=II classification was included as a binary outcome variable in our models. CIs were estimated using bootstrap methods (2000 bootstrap resamples).

^b AUROCC was estimated assuming a higher GBS would be associated with increased risk of Forrest I-II classification.

DISCUSSION

Among the 153 patients in our cohort study:

- The median age was 58 years (IQR XMR 11 (IQR 7 to 13)).
- 28 (18.3%) patients had Forrest I-II classification identified during endoscopy.
- The AUROCC for the ability of GBS to detect Forrest I-II classification was 0.49 (95% CI 0.37 to 0.62).
- AUROCC for the ability of each patient characteristic to detect Forrest I-II classification is shown in Table 1.
- Models that contained age, diastolic blood pressure and nationality/immigration status in addition to Glasgow-Blatchford score provided the highest overall AUROC with confidence intervals significantly higher than GBS alone.

CONCLUSION

In our study, there was no evidence that the GBS score by itself was a useful tool at identifying patients with Forrest I-II classification during endoscopy. Our data suggested younger age, nationality / immigration status along with lower DBP may be better predictors of Forrest I-II classification when considered with the Glasgow-Blatchford score.