A Risk Score derived from a large Gastrointestinal Bleeding Registry

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Introduction
Acute upper gastrointestinal bleeding is a common cause for attendance to the Emergency Department with a wide range of clinical severity, ranging from insignificant to life-threatening. The use of risk scores to stratify the severity of bleeding is useful for the efficient use of healthcare resources.

Objectives
To devise a risk score to identify patients suitable for early discharge.

Methodology
This is a retrospective analysis of three years of data (2008-2010) from a prospectively collected gastrointestinal bleeding registry. Patients suitable for early discharge were defined as patients who were discharged <72 hours and with no re-bleeding or mortality within 30 days. Univariate analysis of risk factors were done and those retained significance in multivariate analyses were selected for incorporation into the risk score. The odds ratios ratio for each independent predictor would be used to provide the weighting for each parameter in the score.

Result
Data from a total of 2487 patients was obtained from the gastrointestinal bleeding registry with 820 patients classified as suitable for early discharge. Analysis showed that clinical parameters such age, urea level, systolic blood pressure, heart rate, non-use of anticoagulants, acid suppressive agents and endoscopic parameters such as absence of blood, varices or stigmata of recent hemorrhage were all independent identifiers for patients suitable for early discharge. The new risk score has an area under a receiver operating characteristic of 0.784 (95% CI: 0.765 - 0.802). Use of a
score of 1 or less (maximum score 20) will allow correct identification of 13.8% of patients suitable for early discharge but will incorrectly include 2.0% of patients who were not suitable for early discharge (p<0.001). The new score is promising but requires prospective studies for further refinement.