Timing of endoscopy for acute upper gastrointestinal bleeding: journal club review

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Article Type: Randomized Controlled Trial

Ratings: *Methods*—4/5, *Usefulness*—4/5

Objectives

To evaluate a strategy of urgent (< 6 h) compared to early (6–24 h) endoscopy after gastroenterology consultation for high-risk patients with UGIB.

Methods

Design

Prospective, randomized, unblinded, controlled trial.

Setting

Adult (≥ 18 years) emergency department or medical ward patients in a university hospital in Hong Kong from 2012 to 2018.

Subjects

UGIB (melena, hematemesis, or both) and predicted to be at high risk for further bleeding or death (Glasgow-Blatchford

Introduction

Background

Acute upper gastrointestinal bleeding (UGIB) has a mortality of 10%. Endoscopy within 24 h is recommended by international consensus guidelines [1] to facilitate treatment of actively bleeding or high-risk lesions. However, data are conflicting on whether earlier endoscopic intervention in high-risk patients with UGIB improves outcomes.

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score ≥ 12) [2]. Patients with shock refractory to initial resuscitation were excluded. Participants otherwise received standard therapy for UGIB (e.g., proton-pump inhibitor bolus and infusion).

Intervention

Urgent (<6 h) compared to early (6–24 h) endoscopy after gastroenterology consultation.

Outcomes

Primary outcome was 30-day all-cause mortality. Secondary outcomes included receipt of endoscopic intervention, further bleeding, length of stay in hospital and ICU, need for blood transfusion, need for emergency surgery or angioembolization.

Main results

516 patients meeting eligibility criteria were enrolled in the trial with 258 assigned to either urgent or early endoscopy. Baseline clinical and demographic variables were similar between the groups, with similar time from presentation to gastroenterology consultation. Time from gastroenterology consultation to endoscopy was 2.5 ± 1.7 h and 16.8 ± 6.8 h in the urgent and early endoscopy groups, respectively. Emergency endoscopy was performed in 20 patients (7.8%) in the early endoscopy group.

Outcomes were assessed using an intention-to-treat analysis. The primary outcome of all-cause mortality at 30 days was not significantly different: 23 patients (8.9%) in the urgent endoscopy group and 17 (6.6%) in the early endoscopy group died (hazard ratio 1.35; 95% CI 0.72–2.54), with a difference of 2.3% (95% CI –2.3 to 6.9). There were no statistically significant differences in secondary outcomes, although there was a higher endoscopic intervention rate in the urgent endoscopy group.

Appraisal

Strengths

- Clear and clinically important question with significant resource implications.
- Pragmatic study—addresses the presentation of “UGIB” rather than a diagnosis.
- Uses a validated risk-assessment score.

- Patient-centred, objective outcomes.
- Well balanced baseline populations.
- Intention-to-treat analysis.

Limitations

- Low observed mortality (6.6–8.9%) compared to their estimate of 16% used for power calculations.
- 7.8% of patients in the early endoscopy group received emergency endoscopy: may have diluted any comparative effectiveness in the urgent group.
- Limited generalizability.
 - Findings cannot be applied to hemodynamically unstable upper GI bleed patients as these patients were excluded.
 - Study performed only in Hong Kong.
- Limited applicability to EDs.
 - Timing of endoscopy defined as time from gastroenterology consultation versus time from ED presentation, making comparison to previous studies difficult.
- Unclear why a Glasgow Blatchford score of ≥ 12 was used, when the authors specifically note that a score ≥ 7 has been validated in the literature.

Context

Previous randomized trials have not focused on patients at high-risk for further bleeding or death, and have lacked risk-stratification in UGIB. However, it is the opinion of our local experts in gastroenterology that the current trial focusing on high-risk patients is congruent with the results of these prior trials. They also note that perhaps a specific subset of less stable patients would benefit from early endoscopy, but given the ethical considerations involved it would be difficult to design a trial that randomizes these patients to a conservative management strategy.

Bottom line

This study demonstrated no difference in all-cause mortality at 30 days with a strategy of urgent compared to early endoscopy for high-risk, stable patients with UGIB. While it may be safe to perform endoscopy in a non-urgent manner in this population, patients demonstrating clinical deterioration or with signs of further bleeding should continue to receive emergent endoscopy.

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References

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