Timing of Colonoscopy for Lower GI Bleeding

Tsay C, Shung D, Frumento KS, et al. Early colonoscopy does not improve outcomes of patients with lower gastrointestinal bleeding: systematic review of randomized trials. *Clinical Gastroenterology and Hepatology* 2020;18:1696-1703.

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Summary

Clinical guidelines recommend colonoscopy evaluation within 24 hours of presentation or admission for patients presenting with severe or high-risk features of overt lower gastrointestinal bleeding (LGIB), but the optimal timing for performing a colonoscopy in patients with LGIB is not well established. Tsay and colleagues performed a systematic review and meta-analysis of randomized controlled trials (RCTs) assessing colonoscopy within 24 hours (early) compared to colonoscopy after 24 hours (elective). The primary outcome was further bleeding, defined as persistent or recurrent bleeding after index colonoscopy or other initial diagnostic testing.

Early colonoscopy, performed within 24 hours, does not provide clinical benefit compared with elective colonoscopy for patients hospitalized with acute LGIB. Further bleeding was not decreased among patients who underwent early versus elective colonoscopy (relative risk [RR] = 1.57; 95% CI. 0.74-3.31). No significant differences in secondary outcomes, including mortality (RR, 0.93; 95% CI, 0.05–17.21), diagnostic yield (RR, 1.09; 95% CI, 0.99–1.21), endoscopic intervention (RR, 1.53; 95% CI, 0.67–3.48), or adverse events (RR, 0.92; 95% CI, 0.36–2.36) were detected between early versus elective colonoscopy. All patients in the 4 RCTs were hospitalized, and severe bleeding or hemodynamic instability occurred in 26%–83% of patients in the 4 studies. Hemodynamic instability was not a significant predictor for the outcome of further bleeding on meta-regression analysis of the 4 RCTs.

In conclusion, a meta-analysis of RCTs found that colonoscopy within 24 hours does not reduce further bleeding or mortality in patients hospitalized with acute LGIB. Based on these findings, patients hospitalized with acute LGIB do not generally require early colonoscopy.

Clinical Practice Take-Home Points

- A systematic review and meta-analysis of RCTs showed that early colonoscopy within 24 hours is generally safe, but does not improve clinical outcomes such as further bleeding or mortality in patients hospitalized with acute LGIB.
- Elective colonoscopy performed 24 hours or more after presentation is appropriate for most patients hospitalized with acute LGIB.
- Further studies including only patients with hemodynamic instability or other high-risk characteristics are necessary to determine if a subset of patients with LGIB might benefit from early colonoscopy.

Table 1. Meta-analyses of 4 randomized trials (N = 463) comparing early vs elective colonoscopy for acute lower gastrointestinal bleeding.

Outcomes	Relative risk (95% CI)	Heterogeneity I^2	Heterogeneity *P* value
Further bleeding	1.57 (0.74–3.31)	55	.08
Mortality	0.93 (0.05–17.21)	61	.11
Diagnostic yield	1.09 (0.99–1.21)	44	.15
Stigmata of recent hemorrhage	1.33 (0.97–1.82)	7	.36
Endoscopic intervention	1.53 (0.67–3.48)	64	.04
Any primary hemostatic intervention (endoscopic, surgical, or IR)	1.33 (0.92–1.92)	0	.61
Surgery or IR after initial intervention	1.17 (0.48–2.83)	0	.55
Adverse events	0.92 (0.36–2.36)	0	.73

IR, interventional radiology.

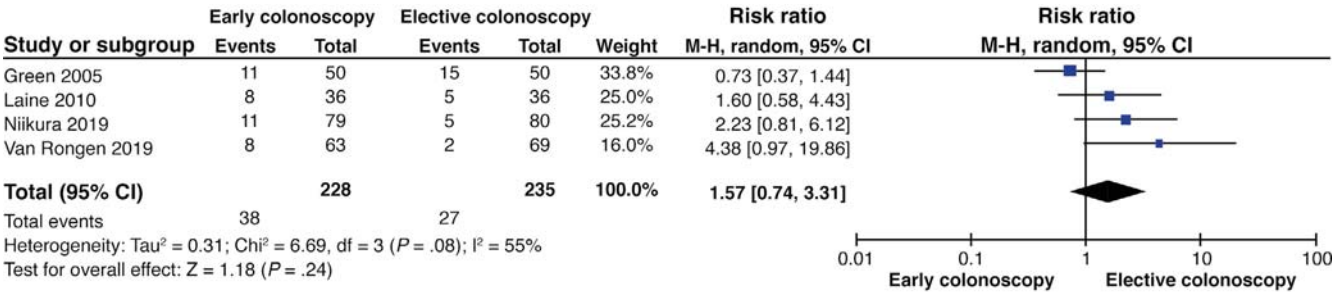

Figure 1. Forest plot of primary outcome of further bleeding. M-H, Mantel-Haenszel.