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## Re-Visiting Metoclopramide to Optimize Visualization with Gastrointestinal Bleeding – Mobilizing Existing Data

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Proximal gastric visualization during endoscopy is often precluded in the event of an upper gastrointestinal bleed (UGIB) due to retained blood.<sup>1</sup> Prokinetic agents might improve visualization by increasing the tone and amplitude of gastric contractions.<sup>2</sup>

Despite its common use, there remains no published data on the efficacy of using metoclopramide prior to endoscopy in cases of acute UGIB. The 2010 consensus recommendation against the routine use of promotility agents in nonvariceal UGIB referenced a meta-analysis in which prokinetic administration reduced the need for repeat endoscopy without additional clinical benefits.<sup>3,4</sup> This observation was driven by the results of two randomized control trials (RCTs) using erythromycin, with conclusions regarding metoclopramide limited to the findings of two unpublished abstracts.<sup>5,6</sup> Since 2010, a meta-analysis of eight RCTs has shown that pre-endoscopic erythromycin improved visualization, reduced the need for repeat endoscopy, and decreased the length of hospital stay.<sup>7</sup> Conversely, a placebo-controlled RCT of 23 patients presented in an abstract form showed no effect of metoclopramide on visualization.<sup>8,9</sup>

Given the lack of published data on the use of metoclopramide, we re-examined our institution's data on endoscopic

visualization in patients with UGIB presented in an abstract form. This RCT randomized 52 consecutive patients with overt UGIB (including from portal hypertension) who had not received gastric lavage or motility-affecting medications to receive either metoclopramide 30–120 minutes prior to endoscopy or no medication. The investigators used Avgerinos scores<sup>10,11</sup> to assess the visual quality of the endoscopy. Previous reports showed a non-significant trend toward improved proximal gastric visualization, with no effects on the duration of endoscopy, transfusion requirement, need for repeat endoscopy, or length of hospital stay. We have subsequently stratified these results based on the etiology for bleeding. Our subgroup analysis revealed that metoclopramide improves fundal visualization in patients with non-ulcer causes of UGIB (mean Avgerinos score: 1.67, standard deviation [SD]=0.52) compared to not using metoclopramide in patients with non-ulcer causes of UGIB (mean Avgerinos score: 0.40, SD=0.55). These findings require further validation with a larger sample size but raise the hypothesis that metoclopramide may improve visualization in the subgroup of patients in whom portal hypertension is the etiology for UGIB.

### Conflicts of Interest

The authors have no financial conflicts of interest.

### Author Contributions

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