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Abstract Discussion Forum **(0)**

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COMPARISON OF PRE-ENDOSCOPY ERYTHROMYCIN TO METOCLOPRAMIDE FOR UPPER GASTROINTESTINAL BLEEDING – A SYSTEMATIC REVIEW AND NETWORK META-ANALYSIS

Society: ASGE

Track: Stomach and Small Bowel Disorders

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Introduction

Adequate mucosal visualization during endoscopy is paramount for identifying and effectively treating the source of upper gastrointestinal bleeding (UGIB). Prokinetic agents are recommended to increase mucosal visibility by inducing gastric contractions, which propel the blood/clots downstream. Erythromycin and metoclopramide have been studied for this purpose, but head-to-head trials are limited.

Methods

A comprehensive search of MEDLINE, EMBASE and Cochrane library was conducted from their inception to July 2024. Randomized control trials (RCTs) comparing erythromycin and metoclopramide, alone or in combination with gastric lavage, to placebo/gastric lavage/no treatment (control) or to each other were included. Endoscopic visualization score and adequate visualization of mucosa were the co-primary endpoints. Network meta-analysis (NMA) was performed to compare the outcomes between the medications and control group. A component network meta-analysis (CNMA) was performed to assess the individual effects of medications and gastric lavage.

Results

Sixteen RCTs (9- full text, 7-abstracts; 1,447 patients) were included in the study. Mean age of the patients was 61.12 Â± 15.24 years and 70.38% of them were males. Ulcers and varices were the most common etiologies of bleeding (43.39% and 34.73%, respectively).

In NMA, erythromycin had a significantly better mucosal visualization score [Standardized mean difference (SMD): 0.58; 95% confidence interval (95% CI): 0.26 to 0.91] and higher rates of adequate mucosal visualization [Risk ratio (RR): 1.55; 95% CI: 1.18-2.04] compared to the control group. It was also superior to the control group in terms of second look endoscopy (RR: 0.61; 95% CI: 0.44-0.84), transfusion requirements (SMD: -0.43; 95% CI: -0.79 to -0.06) and duration of hospitalization (SMD: -0.43; 95% CI: -0.75to -0.11). There were no significant differences in outcomes between erythromycin and metoclopramide or metoclopramide and control. Erythromycin had superior endoscopic visualization score compared to metoclopramide in sensitivity analysis after excluding studies with high risk of bias (SMD: 0.67; 95% CI: 0.07 - 1.15). Erythromycin ranked highest for all the outcomes (Table 1). CNMA demonstrated superior mucosal visibility with erythromycin but not with metoclopramide or gastric lavage (Figures 1A and 1B).

Conclusion

Erythromycin should be administered prior to endoscopy from UGIB to improve mucosal visualization and clinical outcomes. Current evidence is inadequate to support the use of pre-endoscopy metoclopramide or gastric lavage in these patients.

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