Upper GI and Ulcer Bleeding: American College of Gastroenterology Clinical Guideline for Upper GI and Ulcer Bleeding (2021)

About the Guideline

- The guideline was created with input by the American College of Gastroenterology (ACG) Practice Parameters Committee utilizing questions in the PICO (population, intervention, comparator, outcomes) format to guide a literature review of randomized control studies (RCTs) and observational studies. All literature references used were less than 5 years old.
- The Grading of Recommendations, Assessment, Development and Evaluation (GRADE) methodology was utilized to evaluate the quality of evidence and make recommendations that are described as either strong or conditional.

Key Clinical Considerations

Become familiar with the recommendations and best-practice statements provided in this guideline.

Background

- Gastrointestinal (GI) bleeding accounts for more than half a million hospital admissions a year in the United States.
- Upper GI bleeding (UGIB) is defined as bleeding that starts in the esophagus, stomach, or duodenum.
- Eighty percent of UGIB cases presenting to the emergency department result in hospital admission.
- This guideline addresses patients who present with vomiting of red blood or coffee-grounds material (hematemesis); black, tarry stool (melena); or stool that is red or maroon (hematochezia).
- This guideline includes recommendations from time of first presentation to endoscopy, if warranted, and post-endoscopy, when the cause is a bleeding ulcer, which is the most common cause of UGIB.

Risk Stratification

- Admission to the hospital is not suggested for patients presenting to the emergency department with UGIB but who are deemed very low risk; they should be discharged with outpatient follow-up.
    - The Glasgow-Blatchford score is a risk stratification tool that may be utilized.
    - Patient circumstances should be considered (comorbid diseases, age, access to care as an outpatient, dependability, and social support network) in the decision-making process.

Red Blood Cell Transfusion

- Red blood cell transfusion is suggested for patients presenting with a hemoglobin (Hgb) value less than or equal to 7 g/dL.

  - Patients with preexisting cardiovascular disease may be transfused for a Hgb value less than or equal to 8 g/dL.
  - Transfusion may be considered for hypotensive patients receiving fluid resuscitation who have a Hgb higher than 7 g/dL.

Pre-endoscopic Medical Therapy

- An infusion of erythromycin is suggested prior to endoscopy.
  - Erythromycin is a prokinetic agent that propels blood and clots distally from the upper GI tract, which improves visualization during endoscopy.
  - Dose recommendation is 250 mg intravenously (IV) 20 to 90 minutes prior to endoscopy; this has been found to decrease length of stay and the need for repeat endoscopy.
- No recommendation has been made for or against proton pump inhibitor (PPI) therapy prior to endoscopy in UGIB; there was no conclusive evidence as to its benefit.
  - PPI therapy may reduce the need for endoscopy and therefore may be chosen for a select group of patients who, along with their healthcare providers, find this preferable, both economically and as a treatment course.

Endoscopy for UGIB

- For patients with UGIB who are admitted to, or who are under observation in, the hospital, endoscopy is suggested within 24 hours of presentation.
  - This 24-hour time frame allows for comorbidities to be assessed and for resuscitation to occur.
- Endoscopic therapy is recommended in patients with UGIB due to active spurting, active oozing, and nonbleeding visible vessels.
- Due to lack of evidence, no recommendation has been made for or against endoscopic therapy in patients with UGIB due to ulcers with adherent clots resistant to vigorous irrigation.
- For UGIB due to ulcers, endoscopic hemostatic therapy with bipolar electrocoagulation, heater probe, or injection of absolute ethanol is recommended.
- For UGIB due to ulcers, treatment with clips, argon plasma coagulation, or soft monopolar electrocoagulation is suggested.
- Epinephrine injection alone is not recommended for UGIB due to ulcers; it is recommended instead in combination with another hemostatic treatment.
- For actively bleeding ulcers, hemostatic powder spray TC-325 is suggested.
- If recurrent bleeding from ulcers develops after an earlier effective endoscopic hemostasis treatment, over-the-scope clips are suggested.

Antisecretory Therapy

- Following successful endoscopic hemostasis treatment of a bleeding ulcer, high-dose PPI therapy given either continuously or intermittently over 3 days is recommended.
  - High-dose therapy is described as greater than or equal to 80 mg daily for 3 days or more, *either as*
    - Continuous therapy: IV 80 mg initially then 8 mg/hr, ***or***

  - Intermittent therapy: either IV or oral, with suggested dosing of 80 mg initially, followed by 40 mg, 2 to 4 times daily.

- Following short term PPI therapy (as above) in high-risk patients, continued PPI therapy is suggested for days 4 through 14 after the initial endoscopy, for a total of 2 weeks.

Recurrent Bleeding

- For recurrent bleeding after endoscopic therapy for a bleeding ulcer, a repeat endoscopy with endoscopic therapy is suggested rather than surgery or transcatheter arterial embolization (TAE).

Failure of Endoscopic Hemostatic Therapy

- TAE is suggested as the subsequent treatment plan for those patients with UGIB ulcers who have not had successful endoscopic hemostatic treatment.

Reference

Laine, L., et al. (2021). ACG clinical guideline: Upper gastrointestinal and ulcer bleeding. *American Journal of Gastroenterology, 116*(5), 899–917. Retrieved March 2022 from https://doi.org/10.14309/ajg.0000000000001245