Diagnostic yield of colonoscopy for melena after nondiagnostic upper endoscopy is lower than previously reported

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A new study from researchers in Oregon reports that the diagnostic yield of colonoscopy to investigate melena after a nondiagnostic upper endoscopy is lower, 4.8 percent, than previously reported. The rate of therapeutic intervention in this population is very low; therefore, patients with melena and a nondiagnostic upper endoscopy who are stable and without evidence of ongoing bleeding may be able to safely undergo elective colonoscopy. This study is the largest to-date to examine the diagnostic yield of colonoscopy to investigate melena after a nondiagnostic upper endoscopy in patients from a broad geographic distribution and a variety of clinical practice settings. The study appears in the April issue of *GIE: Gastrointestinal Endoscopy,* the monthly peer-reviewed scientific journal of the American Society for Gastrointestinal Endoscopy (ASGE).

Melena is the passage of dark tarry stools containing decomposing blood that is usually an indication of bleeding in the upper part of the alimentary canal. The alimentary canal is a long tube made up of the esophagus, stomach, small intestine, and large intestine into which food is taken and digested and from which wastes are passed out of the body. Melena is most frequently caused by an upper gastrointestinal (GI) bleeding source, however, upper endoscopy can be nondiagnostic for a specific source of bleeding in approximately one-fourth of cases in this patient population. It is known that blood in the cecum (the beginning of the large intestine) can also result in melena, demonstrating that lower GI

bleeding sources can cause melena. Consequently, colonoscopy is frequently performed in patients with melena after a nondiagnostic upper endoscopy in order to exclude a lower GI source of the melena.

Previous studies on the diagnostic yield of colonoscopy in patients with melena described a relatively high rate of finding sources of bleeding. These small studies found diagnostic yields of 23 percent to 35 percent for colonoscopy in this patient population.

"We performed this study to describe the diagnostic yield and rate of therapeutic intervention of colonoscopy in this patient population and compare the diagnostic yield with a control population of average-risk patients having screening colonoscopies. We hypothesized that the diagnostic yield of colonoscopy in this clinical setting is lower than previously described but higher than that of average-risk screening patients and that the rate of therapeutic intervention during colonoscopy in patients with melena and a nondiagnostic upper endoscopy is low," said study lead author Jason P. Etzel, MD, Oregon Health and Science University, Portland. "Our results showed an overall low rate, 4.8 percent, of locating a bleeding source on colonoscopy. In addition, the rate of therapeutic intervention during colonoscopy for bleeding was very low at 1.7 percent, suggesting that the majority of these procedures are diagnostic only and could be performed on an elective basis."

Methods

This was a retrospective case-control study that involved patients in the Clinical Outcomes Research Initiative (CORI) database with a colonoscopy performed to investigate melena within 30 days of a nondiagnostic upper endoscopy for the same indication. A control group had colonoscopies performed for average-risk screening. The CORI database is an endoscopic database that collects data from community, academic, and Veterans Affairs settings across a broad geographic area

in the United States. Main outcome measurements were the endoscopic finding of a suspected bleeding source, defined as right-sided arteriovenous malformation, colitis, polyp ≥ 20 mm, tumor, or ulcer, as well as the rate of therapeutic intervention during colonoscopy.

Results

A total of 1,743 colonoscopies were performed to evaluate melena after a nondiagnostic upper endoscopy for the same indication. The melena population included more individuals with advanced age, more men, higher American Society of Anesthesiologists (ASA) Physical Status Classification System scores, and more warfarin use than average-risk screening controls. Melena-related colonoscopies were more likely to be conducted on inpatients, have lower quality bowel preparation, and have fellow involvement than colonoscopies on controls. Colonoscopy was performed the same day as upper endoscopy in 59 percent of cases.

All of the anticipated sources of suspected bleeding were more prevalent in patients with melena, except for polyps ≥ 20 mm in the right side of the colon. The overall rate of finding a suspected lower GI bleeding source in patients with melena was 4.76 percent compared with 1.28 percent in the control population. Notably, colon tumors were nearly three times more likely in the patients with melena than the average risk screening control group. The overall rate of endoscopic therapy in the population with melena was low, with therapy being performed in 1.7 percent of melena-related colonoscopies.

The researchers concluded that the diagnostic yield of colonoscopy to investigate melena after a nondiagnostic upper endoscopy is lower than previously reported. Moreover, the rate of therapeutic intervention in this population is very low; therefore, patients with melena and a nondiagnostic upper endoscopy who are stable and without evidence of ongoing bleeding may be able to safely undergo elective colonoscopy.

Colonoscopy remains useful in this group of patients as they are at increased risk of colorectal cancer. The decision on timing of colonoscopy must be made based on an assessment of the overall clinical context.

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