Endoscopy within 24 hours shows better outcomes in elderly with peptic ulcer bleeding

August 18 2009

A new study shows that elderly patients who underwent endoscopy within one day of presentation for peptic ulcer bleeding had a two-day shorter hospital stay and were less likely to require upper gastrointestinal surgery than patients who did not receive endoscopy within the first day of presentation. Researchers from University Hospitals Case Medical Center in Cleveland, Ohio, note that unless specific contraindications exist, the data supports the routine use of early endoscopy for upper gastrointestinal bleeding. The study appears in the August issue of GIE: *Gastrointestinal Endoscopy*, the monthly peer-reviewed scientific journal of the American Society for Gastrointestinal Endoscopy (ASGE).

A peptic ulcer is a break in the lining of the stomach or duodenum, which is the beginning of the small intestine. The leading cause of peptic ulcers is an infection of the stomach by bacteria known as Helicobacter pylori. Other common causes are the chronic use of anti-inflammatory medicines and cigarette smoking. A peptic ulcer may bleed when either stomach acid or the ulcer penetrates and disrupts a blood vessel located just beneath it. Upper endoscopy, a procedure in which a thin, flexible tube with a light and a camera on the end is inserted through the mouth to help visualize the esophagus, stomach, and duodenum, is performed by a physician to diagnose and treat peptic ulcer bleeding. Upper endoscopy also helps physicians evaluate symptoms of persistent upper abdominal pain, nausea, vomiting, or difficulty swallowing. It is the best method for detecting the cause of bleeding from the upper gastrointestinal tract and is more accurate than X-ray in detecting inflammation, ulcers, and tumors of the esophagus, stomach, and

duodenum.

In 2006, there were an estimated 220,000 hospital discharges for upper gastrointestinal bleeding, with more than 118,000 of these attributed to peptic ulcer disease. Among patients with bleeding ulcers, the inpatient mortality (death) rate was 2.5 percent, the average length of hospital stay was 4.9 days, and the average hospital charges exceeded $28,000. Early upper endoscopy, defined as endoscopy performed within one day of the patient presenting with peptic ulcer bleeding, has been proposed as an intervention to improve efficiency and outcomes for these patients; however, the use and outcomes have not been studied in a national, U.S.-based sample.

The motivation for performing early endoscopy is that it offers the potential for therapy to stop the bleeding and/or to assess an individual's risk of rebleeding if the bleeding has stopped. Endoscopic therapy delivered to an ulcer that is either actively bleeding or one at high risk of rebleeding can reduce bleeding-related morbidity and the need for surgical intervention. Furthermore, endoscopic findings can predict patients at low risk of rebleeding and thus potentially allow cost-effective assessment and treatment of such patients.

"We set out to determine the prevalence and associated outcomes of early versus delayed endoscopy in patients with bleeding peptic ulcers and found that endoscopic intervention in elderly patients within 24 hours of presentation reduced the length of hospital stay by two days compared to those whose endoscopy was delayed," said study lead author Gregory S. Cooper, MD, University Hospitals Case Medical Center, Cleveland, Ohio. "Patients who received an early endoscopy also were less likely to require surgery. Using a large cohort, these results are consistent with the known beneficial effects of this practice."

Patients and Methods

Researchers used a five percent random sample of inpatient and outpatient Medicare claims from 2004 in patients aged 66 years and older. Statistical analysis models (univariate and multivariate) were used to determine factors associated with 30-day mortality, upper gastriointestinal surgery and length of hospital stay. All models adjusted for demographic factors, comorbidity (coexisting or additional diseases) and the use of outpatient management.

Results

Overall, 1,854 (71.5 percent) patients were managed with early endoscopy and 738 (28.5 percent) with delayed endoscopy. Delayed endoscopy was defined as endoscopy performed after one day of the patient presenting with peptic ulcer bleeding. A therapeutic procedure to stop active bleeding or prevent a recurrence in bleeding was performed during endoscopy in 590 (31.8 percent) early endoscopy patients compared with 243 (32.9 percent) delayed endoscopy patients.

Early endoscopy was associated with statistically significant reductions in both the need for surgery to control bleeding and the length of hospital stay. Surgery was performed in 23 (1.2 percent) patients who underwent early endoscopy compared to 25 (3.4 percent) who underwent delayed endoscopy. The median length of hospital stay was four days in patients who underwent early endoscopy compared to six days in patients who underwent delayed endoscopy. Thirty-day mortality was no different between the early and delayed endoscopy groups.

Researchers noted that the use of claims data was lacking in clinical detail and the study was restricted to the Medicare-age population, however, they were able to assess other factors shown to have prognostic value including age and comorbid illness. They concluded that in this large, nationally based cohort of patients with peptic ulcer bleeding,

early endoscopy was associated with increased efficiency of care as measured by a significant reduction in the length of hospital stay. Although they were unable to demonstrate any association with 30-day mortality, the lower rate of upper gastrointestinal surgery associated with early endoscopy is consistent with the beneficial effects of early endoscopic intervention. Therefore, unless specific contraindications exist, given the potential cost savings, the researchers recommend the routine use of this practice.

Source: American Society for Gastrointestinal Endoscopy