First study examines postpolypectomy bleeding in colonoscopy patients on uninterrupted clopidogrel

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Researchers at the Syracuse Veterans Affairs Medical Center in New York examined postpolypectomy bleeding in patients undergoing colonoscopy on uninterrupted clopidogrel and found that the postpolypectomy bleeding rate is significantly higher in patients undergoing polypectomy while taking clopidogrel and concomitant aspirin/nonsteroidal anti-inflammatory drugs, but that the risk is small and the outcome is favorable. This is the first study to evaluate postpolypectomy bleeding in patients on uninterrupted clopidogrel therapy and concludes that routine cessation of clopidogrel in patients before colonoscopy polypectomy is not necessary. The study appears in the May issue of GIE: Gastrointestinal Endoscopy, the monthly peer-reviewed scientific journal of the American Society for Gastrointestinal Endoscopy (ASGE).

Colonoscopy is recommended as the primary screening method for colorectal cancer because of the ability to diagnose and remove polyps (growths in the colon) before they become cancer. Polyp removal is also referred to as polypectomy. Bleeding is the most common complication of colonoscopic polypectomy, ranging from 0.3 percent to 3.6 percent per patient. A number of factors contribute to postpolypectomy bleeding (PPB), among them, anticoagulants significantly increase the risk of PPB, whereas antiplatelet agents, aspirin (ASA), and other nonsteroidal anti-inflammatory drugs (NSAIDs) do not. Uninterrupted use of clopidogrel, a newer antiplatelet agent, is recommended in cardiac
patients with drug-eluding stents.

The concern for most endoscopists is the potential increased risk of bleeding after therapeutic interventions, especially polypectomy, in patients whose coagulation status is impaired. The concern for the patient and his or her other treating physicians is the potential for thromboembolic events, which may pose a substantial, even life-threatening, risk to the patient whose anticoagulation therapy is interrupted. Data on the actual risk of the occurrence of these events are limited, particularly for the risks of postpolypectomy bleeding.

"There are no data on the clopidogrel-associated risk of PPB, and the benefit of holding clopidogrel 7 to 10 days before polypectomy remains unproven. At the Syracuse Veterans Affairs Medical Center, clopidogrel is not routinely held before colonoscopy and polypectomy," said study lead author Uma Murthy, MD, Syracuse Veterans Affairs Medical Center, New York. "This study elucidates the risk of bleeding in patients undergoing colonoscopic polypectomy on uninterrupted clopidogrel therapy. We found that the use of clopidogrel alone was not associated with higher rates of PPB, but the risk increased when clopidogrel was concomitantly used with aspirin or other NSAIDs."

**Patients and Methods**

This was a retrospective study of all patients who underwent a colonoscopy with or without a polypectomy on uninterrupted clopidogrel therapy between January 2002 and October 2007 at the Veterans Affairs Medical Center in Syracuse, New York. Electronic pharmacy records and current procedural terminology (CPT) codes identified patients receiving clopidogrel therapy at the time of colonoscopy during the study period. Group A (cases) included 142 patients who underwent polypectomy and 77 underwent colonoscopy without a polypectomy. Group B (controls) comprised 1,243 randomly selected patients during
the same period who had undergone colonoscopic polypectomy but were not receiving clopidogrel therapy. Patients with acute gastrointestinal bleeding were excluded.

Demographics, clinical parameters, polyp characteristics, polypectomy techniques, and postpolypectomy events in the groups were compared by univariate analysis. Stepwise logistic regression analyses identified independent risk factors associated with PPB. There was no difference in polyp number per patient, location, adenoma detection rate, and polypectomy technique between groups A and B.

Results

Forty-six patients had PPB, 8 in group A and 38 in group B. Among the postpolypectomy bleeders, aspirin/NSAID use was significantly higher in patients taking clopidogrel (8/8 vs. 16/38 not on clopidogrel). The immediate (intraprocedural) bleeding rate was similar in the two groups (2.1 percent vs. 2.1 percent). Delayed (postprocedural) PPB rate was higher in the group taking clopidogrel (3.5 percent vs. 1.0 percent). Delayed bleeding of significance requiring hospitalization and transfusion/intervention was also higher in patients taking clopidogrel (2.1 percent vs. 0.4 percent). The length of hospital stay and interventions for PPB were comparable between the two groups. There was no mortality.

Univariate comparison between 46 PPB cases and 1,339 nonbleeders showed that patients with PPB were older and had more polyps removed. Use of clopidogrel alone or aspirin/NSAIDs alone was comparable between PPB patients and nonbleeders, however, the concomitant use of clopidogrel and aspirin/NSAID was significantly higher among PPB patients. Concomitant use of clopidogrel and aspirin/other NSAIDs and the number of polyps removed were the only significant risk factors associated with PPB. Clopidogrel alone was not an independent risk
Researchers concluded that the postpolypectomy bleeding rate is significantly higher in patients undergoing polypectomy while taking clopidogrel and concomitant aspirin/nonsteroidal anti-inflammatory drugs, but the risk is small and the outcome is favorable. Routine cessation of clopidogrel in patients before colonoscopy polypectomy is not necessary. This is the first study to show that in patients taking clopidogrel, PPB did not occur without concomitant aspirin/NSAID use.

Researchers further noted that stopping clopidogrel in individuals with cardiovascular and atherothrombotic diseases predisposes them to the serious risk of acute ischemic events, especially when clopidogrel is held within 90 days of initiation of therapy. They support the recommendation to defer elective/screening colonoscopy for the first 6 to 12 months after coronary intervention. Even after 12 months, it is unnecessary to hold clopidogrel in all individuals undergoing a screening colonoscopy for polyp detection rates of 25 percent to 35 percent.

In an accompanying editorial, ASGE Past President John L. Petrini, MD, FASGE, Sansum Clinic, Santa Barbara, Ca., and Keck School of Medicine, University of Southern California, Los Angeles, stated, "At the current time, the decision to continue or discontinue antiplatelet therapy is not firmly resolved and a standard of practice is not established. Endoscopists and their patients need to be aware of who is being prevented from harm in the decision to alter medications given to reduce the risk of stent occlusion. The article by Singh et al offers some support for those of us who believe that continuing antiplatelet therapy in these patients may be the best way of doing no harm."

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