

Prediction and Prevention of Postpolypectomy Bleeding: Current Challenging Issues

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The colonoscopic polypectomy is at the forefront in reducing the incidence of colorectal cancer. However, the endoscopic polypectomy has been reported to be accompanied by risks of complications. Postpolypectomy bleeding (PPB) is the most common complication, with an incidence ranging from 0.6% to 8% in large series [1-3]. The incidence of PPB has been reported to depend on its definition: early, delayed, and overall [4].

Many factors are associated with an increased risk for PPB and can be categorized into patient-, polyp-, and procedure-related factors. Patient-related factors include the use of an anticoagulant agent and various host comorbidities such as hypertension, severe pulmonary disease, and chronic renal failure. Recently, as more individuals are taking anticoagulant or antiplatelet agents such as warfarin, clopidogrel, aspirin, and nonsteroidal anti-inflammatory drugs, preventing PPB in these patients has become one of challenging issues in a colonoscopic polypectomy. A large retrospective cohort study reported warfarin therapy to be an independent predictor of PPB (adjusted odds ratio, 11.6; 95% confidence interval, 2.3-57.3) and suggested that additional methods to reduce the likelihood of PPB in anticoagulated patients should be investigated [5]. However, warfarin interruption for a colonoscopy also has an increased risk of a thromboembolic event. Garcia et al. [6] reported thromboembolic events in 0.7% of 1,293 patients with warfarin interruptions, and Blacker et al. [7] reported that strokes occurred in 1% of 987 patients with atrial fibrillation after temporary anticoagulation discontinuation. Until now,

whether antiplatelet agents such as aspirin increase the risk of PPB has been debatable [4]. Among polyp-related factors associated with PPB, the size of the polyp, as Moon et al. [8] showed in his retrospective study of the current issue, seems to have the most data supporting it. Polyps larger than 10 mm have been reported to have a 2- to 4.5-times increased risk of PPB [3, 9].

Several colonoscopic procedures, such as injection of an epinephrine solution, endoloops, hemoclips, and argon plasma coagulation, have been proposed for the prevention of PPB. A few randomized studies comparing these methods have been reported [10-14]. Each method has its own efficacy and its own advantages in reducing the risk of PPB; however, none of these methods is totally superior to the others. Kapetanios et al. [4] summarized the key points from these randomized studies as follows: (1) The injection of saline-epinephrine solution at the base of the polyp can prevent early, but not delayed, bleeding. (2) Loop placement can prevent bleeding but, especially in large (>2 cm) polyps, this effect is restricted to early bleeding. (3) Clips may also prevent hemorrhage, but this has not been proven in a randomized trial. (4) Combination techniques may be more effective than a single technique.

Although the overall incidence of PPB is rare, neglecting a meticulous precolonoscopy evaluation of patients to predict the risk factors of PPB and decrease the frequency of this complication cannot be justified. Appropriate use of various methods of PPB prophylaxis can help in reducing the risk of PPB, but more controlled data seem to be needed to clarify the roles of these methods.

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