

CASE REPORT

Endoscopic shielding using oxidized regenerated cellulose after argon plasma coagulation under mandatory dual antiplatelet therapy

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While in broad clinical use in many fields of surgery, endoscopic shielding is considered quite a novel concept in interventional endoscopy, for example, for large postresectional lesions [endoscopic submucosal dissection (ESD) and/or endoscopic mucosal resection (EMR)], with available data indicating prevention of late perforation and/or bleeding as well as accelerated tissue repair/healing.¹ Apart from polyglycolic acid (PGA) sheets, another biocompatible, naturally absorbable hemostatic substance for endoscopic applications is oxidized regenerated cellulose, which is less expensive and more broadly available.² Apart from endoscopic shielding for endoscopic resection procedures, there is an ever-increasing set of clinical applications in interventional endoscopy reported, including perforation and/or fistula closure, difficult-to-treat bleeding situations, and—among others—stricture prevention following esophageal ESD procedures.^{3–5} However, argon plasma coagulation (APC), for which endoscopic shielding has not yet been reported, is by itself considered a low-risk procedure in terms of bleeding in recent guidelines, however, clinical caution is mandatory in the presence of dual antiplatelet therapy (DAPT). Delayed bleeding and/or perforation after APC application, especially in the cecal pole, may occur and may have deleterious consequences in patients with recent coronary stent interventions. From such reasoning, here, the first report on preventive endoscopic shielding of an APC site in such a complex clinical setting is presented. Of note, mandatory DAPT indications are becoming more and more common in

increasingly aging populations with a high comorbidity of advanced cardiovascular disease and colorectal angiodysplasia.

Two months after non-ST segment-elevation myocardial infarction treated by coronary recanalization using two drug-eluting stents (DES), a 63-year-old man presented for recurrent gastrointestinal bleeding and iron deficiency anemia. Endoscopic work-up including small-bowel capsule endoscopy indicated a cecal angiodysplasia as the most likely bleeding source under DAPT with ticagrelor and aspirin. After adequate counseling, APC was performed using low-power 20 W settings (Fig. 1a). The APC-induced ulcer was subsequently provided with two individually trimmed 20 × 20-mm measuring oxidized regenerated cellulose gauzes (Tabotamp, Ethicon, Norderstedt, Germany), the polymers of which swell into a gelatinous mass with hemostatic and antibacterial effects, introduced through the working channel by a standard forceps. After adequate adaptation (Fig. 1b), two standard clips were used to attach the gauzes in place. The further clinical course was uncomplicated.

Endoscopic shielding following APC for angiodysplasia has not yet been reported and may represent a reasonable approach to increasing the safety of APC in DAPT patients, although this clinical assumption may warrant formal systematic study. Many reports on endoscopic shielding have implemented complex delivery approaches, particularly for coverage of extensive mucosal defects, for example, utilizing specialized catheters and standard additional fibrin glue (FG) spraying through specialized catheters with or without clipping, rendering the

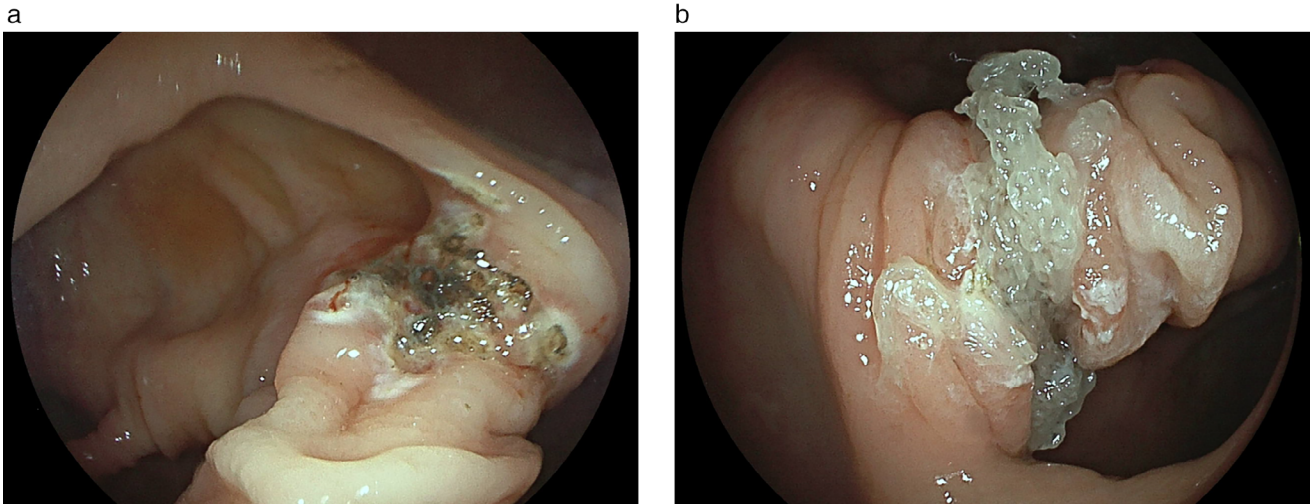


Figure 1 (a) Illustration of the APC treated angiodysplasia in the cecal pole with shallow ulcerations. (b) Gauzes of oxidized regenerated cellulose were applied to the APC site after external grasping and delivery by a standard forceps. APC, argon plasma coagulation.

procedure potentially high-cost, time-consuming, and complex.^{6,7} However, in clinical situations with limited mucosal areas to be covered, the need for FG utilization may become questioned, and standard biopsy forceps delivery followed by clip fixation is considered a more straightforward and easy-to-implement approach for endoscopic shielding using oxidized regenerated cellulose in more circumscribed endoscopic situations.

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