

ANKAFERD BLOOD STOPPER AS AN EFFECTIVE ADJUNCTIVE HEMOSTATIC AGENT FOR THE MANAGEMENT OF LIFE-THREATENING SERIOUS ARTERIAL BLEEDING DUE TO DIEULAFOY'S LESION OF THE DIGESTIVE TRACT*

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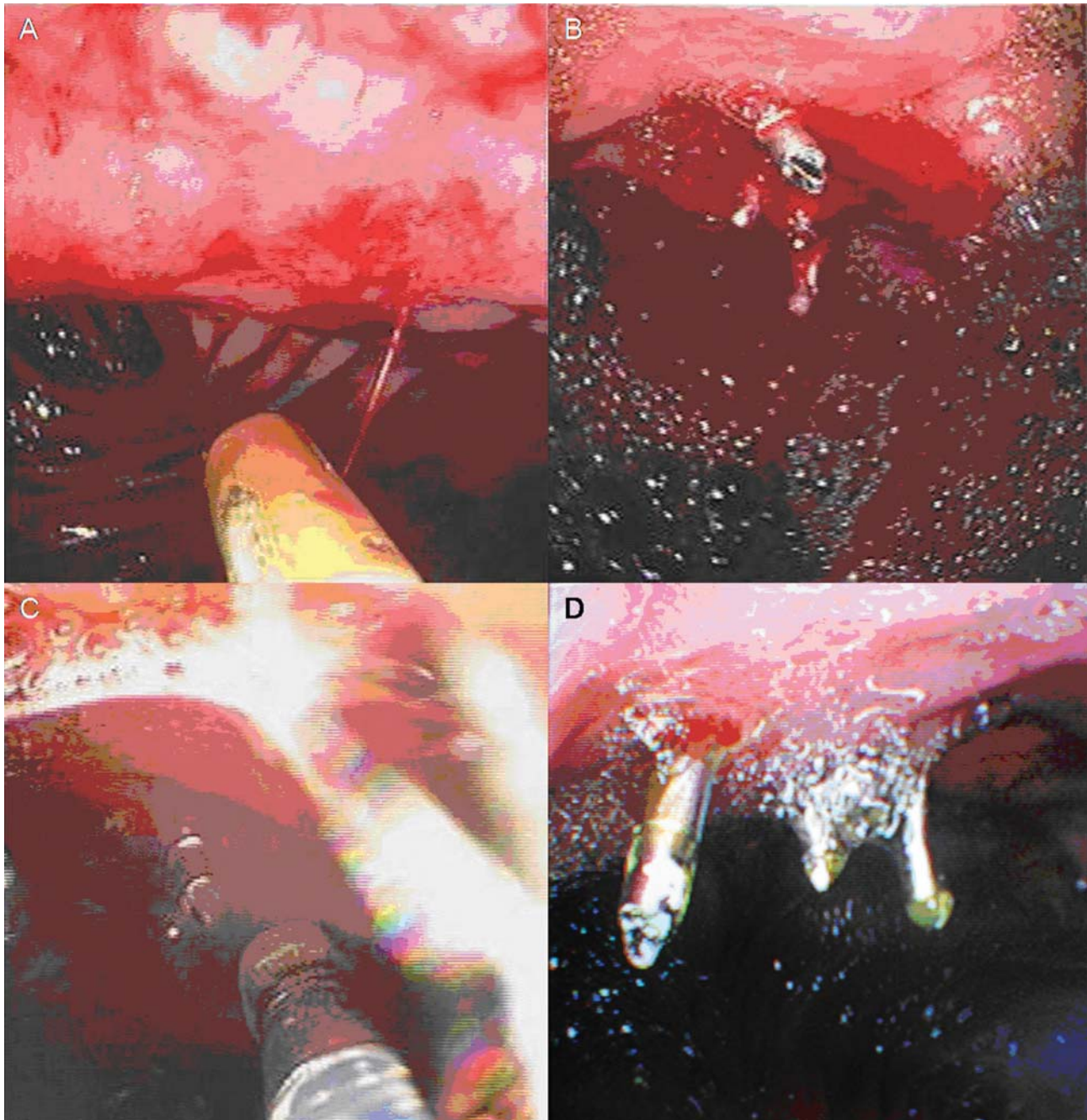
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Dieulafoy lesion is the exteriorization of an arterial vessel into the lumen of the digestive tract, usually leading to a massive and/or recurrent gastrointestinal bleeding. The majority of those lesions occur in the proximal stomach (1). Endoscopic therapy is the 'standard of care' since the success rate of endoscopically accessible Dieulafoy lesions is about 95% (2-3). Sclerotherapy, argon laser, elastic band ligation, injection of epinephrine and hemoclipping are used with similar success rates (4). On the other hand, endoscopic intervention in Dieulafoy lesions cannot always stop bleeding completely. Therefore, hemorrhagic shock, circulatory failure, morbidity and mortality are still important life-threatening problems in this clinical setting. We, herein, present a patient with massive upper gastrointestinal hemorrhage secondary to Dieulafoy lesion in which a novel hemostatic agent, Ankaferd BloodStopper (ABS), was successfully used adjunctive to hemoclipping and injection of epinephrine.

A 63-year-old man was admitted to our emergency department with rectal bleeding. He had a history of Billroth II surgery for bleeding peptic ulcer disease 30 years ago. He had no other medical problems, and was receiving no medications. His hemoglobin level was 5.6 g/dl. Emergent upper gastrointestinal (GI) endoscopy revealed fresh blood and clots in the residual stomach and efferent loop. A Dieulafoy's lesion with spurting hemorrhage was found near the gastrojejunal anastomosis. We applied initially three hemoclips on the lesion but as the bleeding persisted, 2 mL epinephrine were injected (1:10000 dilution) around the bleeding site. However, mucosal oozing still continued. 12 ml of ABS were applied topically by disposable washing pipe (model: PW-205 L, Olympus corporation, Japan) after the informed consent regarding the off-label use of the ABS as means of attaining hemostasis was obtained from the patient. The bleeding was observed to stop within two seconds. His hemoglobin level subsequently stabilized at 10.2 g/dl without further transfusion, and there was no evidence of continuing gastrointestinal blood loss. Three days later, upper GI endoscopy disclosed the site with hemoclips. There was no further bleeding.

ABS is a unique medicinal plant extract which has historically been used in Turkish traditional medicine as a hemostatic agent (3). Following the safety and efficacy reports, ABS has been approved in the management of dental surgery bleedings and external hemorrhage in Turkey (4). ABS induces very rapid formation of a unique protein network in the plasma and serum samples. Blood cells, particularly erythrocytes aggregate rapidly (< 1 second) in the presence of ABS and they are participated in the network formation. Individual coagulation factors are not affected during this anti-hemorrhagic process. For this reason ABS is considered to be effective in patients with deficient primary and/or secondary hemostasis (5).

In the setting of GI bleeding, ABS was previously used with success in a patient having bleeding from the hepaticojejunostomy anastomosis refractory to conventional endoscopic interventions (6). The story of our present patient showed that topical ABS application may assist currently known endoscopic therapeutic measures in the control of Dieulafoy related serious bleeding as well. Since effective methods, such as hemoclipping and epinephrine injection, are present to control bleeding in these lesions, the use of ABS as the first line treatment requires more data from future controlled studies comparing that novel agent with already established modalities. Regarding serious arterial bleeding, however, ABS could be preferred as an effective adjunctive agent to the mechanical intervention into the vessel wall as in our present patient. Neither local adverse effect nor systemic toxicity was observed following the topical application of ABS. Just a local dirty-white colorization in digestive mucosal surface was observed during the local administration of ABS. Although the color change disappears later, it may cause difficulties in detecting the bleeding lesion together with the rapidly formed coagulum. Therefore, ABS must be topically applied after precisely locating the exact side of oozing blood in Dieulafoy related serious bleeding.



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