Upper GI bleeding treated with Hemospray® in Brazil

An 89-year-old patient was hospitalized for complex incisional hernia surgery after surgical treatment of colon cancer 10 years ago. The patient has a history of multiple comorbidities, such as hypertension and diabetes, as well as a previous heart surgery for acute ischemic infarction. The patient uses ASA chronically and was on anticoagulant medications because of his post-operative condition.

The patient presented with two episodes of upper gastrointestinal bleeding during the same hospitalization. The first episode was caused by a Cameron ulcer. At the moment of the EGD, it was actively bleeding (oozing) as seen in Figure 1. The bleeding lesion was properly treated with Hemospray and epinephrine injection (Figure 2). As Hemospray is a new treatment technique, we performed second-look endoscopy on the next day to ensure the success of the therapy. Since the bleeding episode, the patient remained in a poor hemodynamic condition and high pulse rate.

Curiously, at second-look endoscopy, the patient presented an actively bleeding Dieulafoy lesion, about 2 cm distal to the Cameron ulcer lesion (that showed a good response to the Hemospray therapy performed the day before) as seen in Figure 3. Once again, the patient was treated with Hemospray and epinephrine injection. A new EGD was performed on the following day and both bleeding lesions appeared to be very well controlled (Figure 4).

The patient needed two packed red blood cells after each bleeding episode (a total of four packs). Despite the adverse clinical conditions, the patient had a favorable outcome with the use of this new hemostatic tool.

Drs. Felipe I. Baracat and Diogo T. Hourneaux De Moura are not paid consultants for Cook Medical.
A 64-year-old patient, who was treated with rivaroxaban for atrial fibrillation, presented with melena. The patient’s history included diabetes mellitus and ischemic heart disease. After stabilization, an endoscopy was performed and showed a large (3 cm), deep fibrotic ulcer in the duodenal bulb. The surface of the ulcer appeared friable and was bleeding actively from multiple punctate spots, as seen in (Figure 1). We used Hemospray (Cook Medical, Winston-Salem, North Carolina, USA) to provide hemostasis of the diffuse bleeding. We sprayed the powder through a 10 Fr catheter in short bursts (Figure 2). Complete cessation of bleeding was immediately achieved (Figure 3).

We repeated the endoscopy 24 hours later, which showed no bleeding. The ulcer was whitish as it was covered with coagulated Hemospray powder (Figure 4). Because the lesion appeared neoplastic, we performed multiple biopsies and re-applied the Hemospray to prevent re-bleeding. The biopsy showed duodenal adenocarcinoma. A CT scan was subsequently performed. There was no evidence of metastasis but multiple bilateral pulmonary emboli were found. As a result of these CT findings, a third endoscopy was performed to show absence of high-risk features for bleeding prior to starting low molecular weight heparin. Unfortunately, the patient developed a concurrent cerebrovascular event and severe GI bleeding one week later. The rapidity of the patient’s deterioration precluded further endoscopic therapy.

In this case, we found that the use of Hemospray was safe and effective to treat diffuse bleeding from an ulcerated duodenal cancer. We did not use hemostatic clips or thermal coagulation because of the diffuse nature of the bleeding spots. Further, the fibrotic base and depth of the ulcer would make treatment using other modalities difficult to apply. The non-contact and non-specific target application of Hemospray makes it easier in these situations.

In conclusion, diffuse bleeding from malignant ulcers may be effectively managed with Hemospray. Definitive treatment targeting the underlying etiology, along with Hemospray, can provide sustained hemostasis.

Drs. Ravishankar Asokkumar, Brian Schwender and Roy Soetikno are not paid consultants for Cook Medical.
Hemospray management of critical bleeding in the duodenal bulb

Background
Since 1987, the Endoscopic Surgery Unit at University of Verona, Italy, has treated more than 7,000 patients with digestive bleeding. Retrospectively, a complete hemostasis has been obtained in more than 94% of cases with the majority of them successfully treated with injection of dilute adrenaline and 1% polidocanol. In case of failure, especially for severe bleeding from the posterior wall of the stomach and duodenum, cyanoacrylate, argon plasma coagulation or hemoclips were used. In a limited number of cases, with large and deep ulcers, bleeding from large vessels, hemodynamic instability and frequent rebleeding, a successful endoscopic treatment was impossible and a surgical intervention required.

Case Report
An 80-year-old was admitted to the First Aid Department for hematemesis and melena. The patient suffered from the outcomes of a previous stroke, atrial fibrillation and gallbladder cancer. At admittance, a severe hemorrhagic shock was present with hypotension, tachycardia, sweating and, finally, gasping. Blood test showed a hemoglobin level of 4.2 g/dl. The patient received concentrated red cells (3 units) and crystalloids during the intervention. After resuscitation and intubation, an urgent gastroscopy was performed.

Procedure
The examination was conducted with an Olympus therapeutic endoscope and Olympus Endowasher. Gastroscopy showed an external compression on the gastric antrum (Figure 1) and an active bleeding (Forrest IA) from a large, deep ulceration in the duodenal bulb (Figures 2 and 3). Any traditional endoscopic treatment was impossible to apply due to the ulcer’s characteristics. The last chance was to apply Hemospray Endoscopic Hemostat.

Immediate hemostasis was obtained (Figures 4 and 5). At the end of the procedure, no bleeding could be found. The patient was admitted to ICU without rebleeding in the successive three days. An abdominal CT scan showed a gallbladder cancer with adhesion to the antro-duodenal region as well as fistulisation and an abscess that produced a large and deep ulceration in the duodenal bulb.

Four days after admission, the patient was awake and conscious, although aphasic as a stroke sequela and hemodynamically stable. The patient was transferred to the Geriatric ward where, after discussion with oncologists and psychiatrists, the patient decided to avoid any other form of treatment. No rebleeding was observed after one month.

Conclusion
The reported case is unique, due to fistulisation in the duodenal bulb of an abscess in a gallbladder cancer. Bleeding was massive, causing a hemorrhagic shock. Hemospray was successful, avoiding a surgical intervention that, considering the multiple comorbidities, would have been dramatic for the patient. Hemospray may be an interesting alternative to other traditional endoscopic treatments to reduce the number of patients that need urgent surgical intervention for massive digestive bleeding and any emergency endoscopy unit should be so equipped.

Drs. Luca Rodella and Filippo Catalano are not paid consultants for Cook Medical.
Hemospray Publications


Easy access to the latest news and clinical data on Hemospray

Cook Medical’s Hemospray website* (www.hemospray.cookmedical.com) is your ultimate destination for the most comprehensive and relevant information on this exciting hemostatic treatment modality. In one place, you can easily access literature, clinical references, FAQs, a video library, links to reference articles and much more. The site also allows you to request a schedule of Vista educational events and other valuable information.

Our goal is to give you everything you need to support you and the patients you serve. Be sure to let us know what you’re thinking with your feedback and comments.

*The Hemospray website is accessible only to those countries where Hemospray is available; for example, the site is currently not available to users in the USA as Hemospray is not for sale in the USA.