

# Endoscopic hemostatic powder as a salvage treatment for acute gastrointestinal bleeding

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See “Current status and clinical outcome of endoscopic hemostatic powder in gastrointestinal bleeding: a retrospective multicenter study” by Zie Hae Lim, Seung In Seo, Dae-Seong Myung, et al., Clin Endosc 2024;57:620–627.

Gastrointestinal (GI) bleeding is a common GI emergency for which endoscopic hemostatic methods are generally the first choice. However, some patients experience persistent bleeding refractory in response to standard hemostasis modalities. According to international guidelines, one recently developed salvage measure in this scenario involves the use of a topical hemostatic spray/powder.<sup>1-3</sup>

The advantages of using topical hemostatic agents include ease of use, lack of need for precise lesion targeting, access to lesions in difficult locations, and the ability to treat a larger surface area.<sup>2</sup> At present, the most studied topical hemostatic agents for nonvariceal upper GI bleeding include TC-325 (Hemospray; Cook Medical), Endoclot (EndoClot Plus), and Inha University-Endoscopic Wound Dressing (UI-EWD) (NextBiomedical). To date, almost all international consensus and guidelines have given conditional or weak recommendations with low levels of evidence regarding the use of topical hemostatic agents as a rescue treatment, as there have been no

randomized controlled trials comparing the efficacy of topical hemostatic agents with any other endoscopic modality as a salvage treatment for GI bleeding that has failed with standard endoscopic hemostasis treatment. However, further clinical evidence is still needed.

In this regard, Lim et al.<sup>4</sup> reported their findings of a multicenter study that investigated the clinical outcomes of UI-EWD use and the independent factors affecting rebleeding rates after endoscopic treatment. A total of 135 patients with both upper and lower GI tract bleeding were retrospectively recruited, but the majority (91.9%) had upper GI tract bleeding. The most common causes of bleeding were peptic ulcer (51.1%), postendoscopic mucosal resection/endoscopic submucosal dissection/endoscopic sphincterotomy bleeding (23.0%), and tumor bleeding (19.3%). In 97% of the patients, the UI-EWD was used after conventional endoscopic therapy failed. The clinical and technical success rates were both 97%, but the early, delayed, and refractory rebleeding rates were reported to be 19.3%, 11.1%, and 12.8%, respectively. The authors found that initially elevated blood urea nitrogen levels and active bleeding lesions were factors associated with early rebleeding. This study demonstrated that UI-EWD use was a useful salvage method in patients for whom standard endoscopic hemostasis methods failed. However, due to the high recurrence rate, it is important to consider this method as only a temporizing measure that needs to be followed by a definitive hemostatic modality. A previous study used TC-325 powder, another topical hemostatic agent, and

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found that the agent sloughed off the mucosa and was eliminated from the GI tract within 24 hours of its application.<sup>5</sup> It should be noted that in patients with active bleeding lesions, the hemostatic effect may be limited because of the rapid “wash-away” effect of the hemostatic agent.

This study has several limitations. First, this was a retrospective study with a relatively small sample size. Second, the patients included in this study had heterogeneous bleeding causes. Some patients had initially suboptimal endoscopic hemostasis treatment, including 17.8% who received epinephrine injection alone. Third, the endoscopists’ experiences were not addressed in the study. One patient experienced perforation. Although the complication rate was low, this severe complication should be explored in detail so that we can avoid it when the technique is widely applied in clinical practice. If the bleeding site is suspected of having a high risk of perforation, the use of carbon dioxide gas with hemostasis could prove helpful.

In summary, Lim et al.’s study<sup>4</sup> has shed further light on the possibility of applying UI-EWD as a salvage measure in patients with GI bleeding who have failed to achieve control with standard hemostatic modalities, especially in patients with peptic ulcers, post-procedure-related bleeding, and tumor bleeding. However, it should be used with caution, as serious complications such as perforation have been reported. Furthermore, patients should be closely monitored after treatment due to the high possibility of rebleeding, particularly in patients with initially elevated blood urea nitrogen levels and/or active bleeding lesions. Although this study is unlikely to change the strength of the recommendations in the current guidelines due to its design limitations, it provides an initial basis for future randomized controlled trials with more rigorous criteria on bleeding causes, detailed implementation techniques, and treatment indications

of UI-EWD as a salvage hemostasis measure.

## Conflicts of Interest

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## REFERENCES

1. Sung JJ, Chiu PW, Chan FK, et al. Asia-Pacific working group consensus on non-variceal upper gastrointestinal bleeding: an update 2018. *Gut* 2018;67:1757–1768.
2. Gralnek IM, Stanley AJ, Morris AJ, et al. Endoscopic diagnosis and management of nonvariceal upper gastrointestinal hemorrhage (NVUGIH): European Society of Gastrointestinal Endoscopy (ESGE) Guideline-update 2021. *Endoscopy* 2021;53:300–332.
3. Laine L, Barkun AN, Saltzman JR, et al. ACG Clinical Guideline: upper gastrointestinal and ulcer bleeding. *Am J Gastroenterol* 2021;116:899–917.
4. Lim ZH, Seo SI, Myung DS, et al. Current status and clinical outcome of endoscopic hemostatic powder in gastrointestinal bleeding: a retrospective multicenter study. *Clin Endosc* 2024;57:620–627.
5. Chen YI, Barkun AN. Hemostatic powders in gastrointestinal bleeding: a systematic review. *Gastrointest Endosc Clin N Am* 2015;25:535–552.