Indian Journal of Gastroenterology (March–April 2022) 41(2):208–209
https://doi.org/10.1007/s12664-021-01177-5

IMAGE

Innovative rescue therapy for ulcer bleeding after band ligation: New ENDOLOOP/clips/grasping forceps technique

Hiroyuki Hisada[1,2] · Akihiro Miyakawa[2] · Kenji Shimura[2]

Published online: 19 April 2021
© The Author(s) 2021

A 72-year-old man presented with chronic hepatitis C infection and esophageal variceal bleeding. He had undergone endoscopic variceal ligation (EVL) 4 months earlier for hemostatic control. Esophagogastroduodenoscopy revealed a band ulcer with a visibly bleeding vessel (Fig. 1a). On repeat EVL, hemostasis could not be achieved because of decreased tissue compliance. A Sengstaken–Blakemore (SB) tube (Sumitomo Bakelite Co., Ltd., Tokyo, Japan) was placed as a temporary measure. A second endoscopic procedure was performed the next day to remove the SB tube; rebleeding was observed. Instead of performing EVL again, we placed three endoclips near the bleeding vessel. The ENDOLOOP was then placed over the endoclips, near the base of the mucosa, to close the vessel in a purse-string manner by using a two-channel endoscope; the grasping forceps were used to cover the vessel with mucosa. Successful hemostasis was achieved (Fig. 1b, c); there was no evidence of new bleeding 3 months after surgery (Fig. 1d).

Esophageal variceal bleeding is one of the most common complications of liver cirrhosis. EVL is a widely accepted treatment of bleeding and is superior to endoscopic sclerotherapy as it involves fewer complications. EVL-induced ulcer formation is a known serious complication of this procedure, with a mortality rate of 27.3% [1]; no clear treatment has been described for it yet. Herein, we describe our approach to successful hemostasis of an EVL-induced ulcer with the use of a two-channel endoscope (GIF-2TQ260M, Olympus, Tokyo, Japan), grasping forceps (FG-42L-1, Olympus, Tokyo, Japan), endoclips (EZ clip, Olympus, Tokyo, Japan), and an ENDOLOOP (Polyloop; HX-400U-30, Olympus, Tokyo, Japan).

We placed the endoscopic clipping to form an anchor and then placed the ENDOLOOP at the base of the mucosa using grasping forceps that were used to cover the bleeding vessel with mucosa. Our novel approach helped achieve hemostatic control of bleeding of EVL-induced ulcer and should be considered a new treatment modality to control initial bleeding.

The prevalence of EVL-induced ulcer bleeding is only 3.6%, but it is fatal in some cases [1]. Several treatment methods, including endoscopic injection sclerotherapy, EVL, transjugular intrahepatic portosystemic shunt, over-the-scope clipping [2], and self-expanding metal stent [3], have been suggested; however, the methods used here may be safer and more economical than these modalities. Moreover, this method has been used for hemostasis of postpolypectomy bleeding and nonvariceal upper gastrointestinal bleeding [4, 5].

We believe that the combined use of endoclips with an ENDOLOOP is effective and economical in the management of EVL-induced ulcers.

Compliance with ethical standards

Conflict of interest HH, AM, and KS declare that they have no conflict of interest.

Ethics approval This is a case report. Asahi general hospital Research Ethics Committee has confirmed that no ethical approval is required.

✉ Hiroyuki Hisada
h27swwin@gmail.com

[1] Department of Gastroenterology, The University of Tokyo, 7-3-1, Hongo, Bunkyo-ku, Tokyo 113-8655, Japan

[2] Department of Gastroenterology, Asahi General Hospital, Chiba, Japan

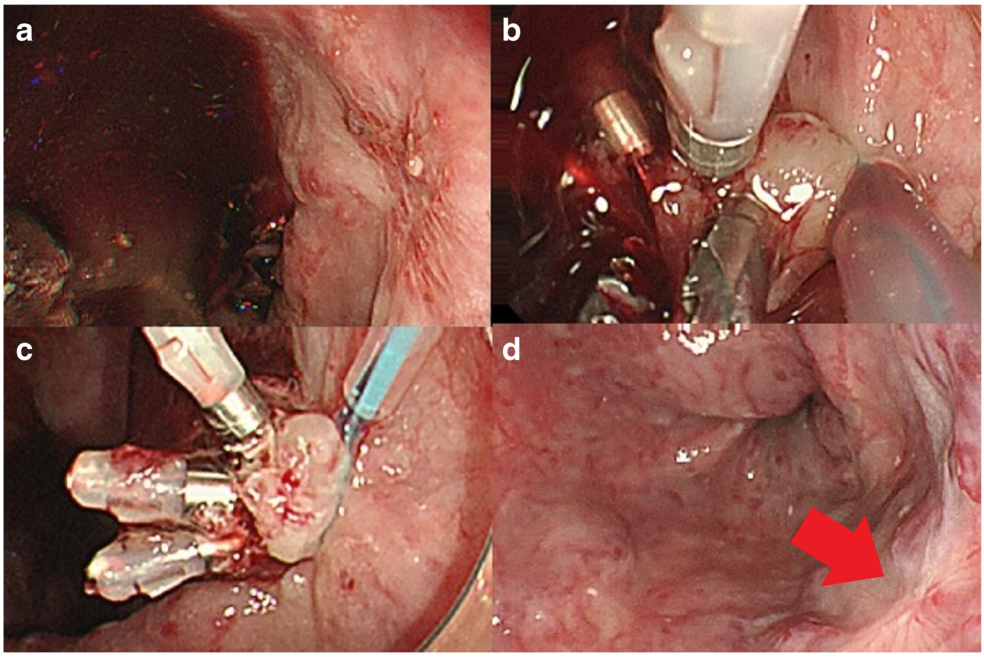

Fig. 1 **a** Esophagogastroduodenoscopy showing a visibly bleeding vessel at the base of the band of ulcers. **b** After clipping of the bleeding vessel, grasping forceps were used to cover the bleeding vessel with mucosa, and the ENDOLOOP was then advanced to the base of the lesion. **c** The ENDOLOOP was placed at the base of the lesion. **d** There was no evidence of new bleeding at the 3-month follow-up

Consent to participate Written informed consent was obtained from the patient.

Consent to publish The patient has consented to the submission of the report to the journal.

Disclaimer The authors are solely responsible for the data and the contents of the paper. In no way, the Honorary Editor-in-Chief, Editorial Board Members, the Indian Society of Gastroenterology or the printer/publishers are responsible for the results/findings and content of this article.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

References

1. Cho E, Jun CH, Cho SB, et al. Endoscopic variceal ligation-induced ulcer bleeding: what are the risk factors and treatment strategies? Medicine (Baltimore). 2017;96:e7157.
2. Lopimpisuth C, Kerdsirichairat T, Khoshknab MP, Hamilton JP, Ngamruengphong S. Over-the-scope clip as salvage therapy in refractory bleeding from esophageal variceal band ligation-induced ulcer. Endoscopy. 2020;52:E33–4.
3. Choudhary NS, Puri R, Saigal S, Saraf N, Sud R, Soin AS. Innovative approach of using esophageal stent for refractory post-band ligation esophageal ulcer bleed following living donor liver transplantation. J Clin Exp Hepatol. 2016;6:149–50.
4. Yen H-H, Yang C-W, Wu S-S, Soon M-S. Massive post-polypectomy hemorrhage: Successful tulip-bundle technique with endoloop for hemostasis. Adv Dig Med. 2016;3:128–31.
5. Lee JH, Kim BK, Seol DC, et al. Rescue endoscopic bleeding control for nonvariceal upper gastrointestinal hemorrhage using clipping and detachable snaring. Endoscopy. 2013;45:489–92.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.