

Superselective microcoil embolization for endoscopically uncontrollable bleeding after endoscopic submucosal dissection

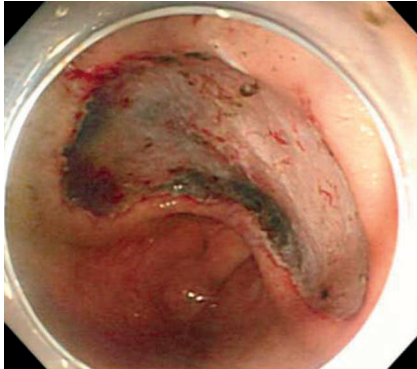


Fig. 1 Gastrosopic view showing a large artificial ulcer after endoscopic submucosal dissection.

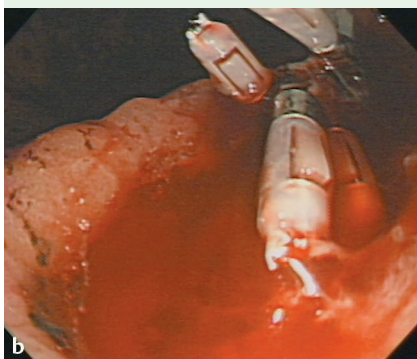
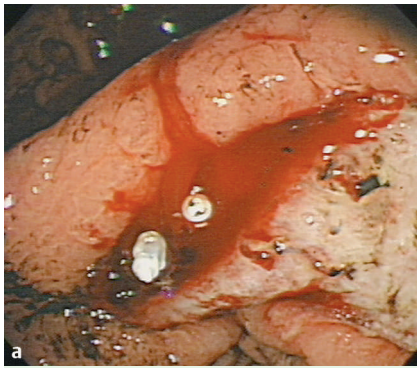


Fig. 2 Emergent gastrosopic views at 12 hours after endoscopic submucosal dissection: **a** ineffective hemostasis after two serial hemoclippings; and **b** close-up view of the bleeding focus – note the active, profuse oozing between the hemoclips.

A 57-year-old man underwent endoscopic submucosal dissection (ESD) for the treatment of early gastric cancer of the antrum (● Fig. 1). There was no immediate bleeding after the procedure,



Fig. 3 **a** Supraselective angiogram demonstrating extravasation, originating from a small side branch of the left gastric artery (arrow). **b** Final angiogram showing successful hemostasis after superselective placement of microcoils within the source artery (arrowheads).

and a proton pump inhibitor was given intravenously for the prevention of delayed bleeding after ESD. Twelve hours after ESD, the patient suddenly developed hematemesis and melena. His systolic blood pressure was 80 mm Hg and heart rate was 110 beats per minute. His hemoglobin level decreased from 14.5 g/dL to 9.2 g/dL. Emergency gastroscopy revealed profuse oozing of blood from the artificial ulcer with an overlying clot. Endoscopic hemostasis using hemoclips was attempted, however, cessation of bleeding was not achieved as the active oozing masked its source (● Fig. 2).

Owing to hemodynamic instability, the patient underwent emergency angiography. Extravasation of contrast medium

was seen from a small side branch of the left gastric artery in the antrum (● Fig. 3a). The bleeding branch was successfully embolized by the placement of microcoils, both proximal and distal to the bleeding site, to prevent re-bleeding related to retrograde perfusion through the collateral vessels. No further extravasation of contrast medium was noted (● Fig. 3b). The patient was discharged after 5 days of close observation and conservative treatment. Endoscopy after 1 month revealed an ESD ulcer scar, without any evidence of ischemic complications (● Fig. 4).

Delayed bleeding, which is defined as hematemesis or melena at 0–30 days after the procedure, may be the most se-



Fig. 4 Follow-up gastroscopic view at 30 days after endoscopic submucosal dissection (ESD) shows an ESD ulcer scar without evidence of ischemic complications.

rious complication of ESD [1]. Delayed recognition or failure to attempt endoscopic hemostasis for such an event may cause subsequent cardiovascular compromise. This report suggests that superselective microcoil embolization can be a lifesaving therapeutic option for endoscopically uncontrollable bleeding after ESD, and it can help avoiding emergency laparotomy [2].

Endoscopy_UCTN_Code_TTT_1AO_2AD
Endoscopy_UCTN_Code_TTT_1AO_2AG

C. K. Lee, J. Y. Park, T. H. Lee, S. H. Lee, I. K. Chung, S. H. Park, H. S. Kim, S. J. Kim
Division of Gastroenterology, Department of Internal Medicine, Soonchunhyang University College of Medicine, Cheonan Hospital, Cheonan, Korea

References

- 1 Takizawa K, Oda I, Gotoda T et al. Routine coagulation of visible vessels may prevent delayed bleeding after endoscopic submucosal dissection – an analysis of risk factors. *Endoscopy* 2008; 40: 179 – 183
- 2 Mezawa S, Homma H, Murase K et al. Superselective transcatheter embolization for acute lower gastrointestinal hemorrhage after endoscopic mucosal resection: a report of 3 cases. *Hepatogastroenterology* 2003; 50: 735 – 737

Bibliography

DOI 10.1055/s-0029-1214627
Endoscopy 2009; 41: E109–E110
© Georg Thieme Verlag KG Stuttgart · New York · ISSN 0013-726X

Corresponding author

C. K. Lee, MD, PhD
Division of Gastroenterology
Department of Internal Medicine
Soonchunhyang University College of Medicine
Cheonan Hospital
23 – 20 Bongmyung-dong
Cheonan
Choongnam 330-721
Korea
Fax: +82-41-5745762
cklee92@paran.com