A rare case of disseminated intravascular coagulation after endoscopic submucosal dissection for early gastric cancer

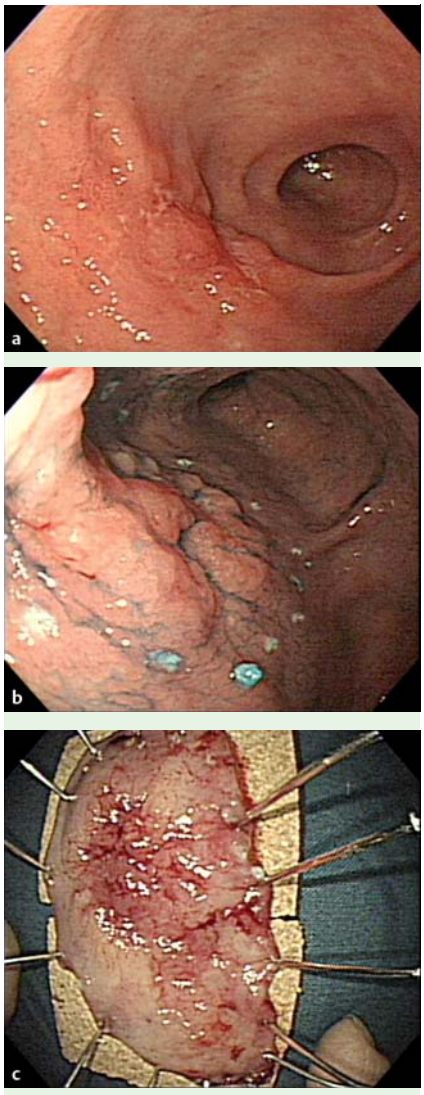

Fig. 1 **a** A flat depressed lesion in the greater curvature of the antrum. **b** Marking was performed. **c** The patient underwent endoscopic submucosal dissection (ESD).

Endoscopic treatment of early gastric cancer (EGC) is currently standard practice in Korea and Japan [1]. Although there are many causes of disseminated intravascular coagulation (DIC), it occurs mostly after sepsis, wide tissue damage, and obstetric complications [2]. The authors report a case of DIC after endoscopic submucosal dissection (ESD), which has never been reported before.

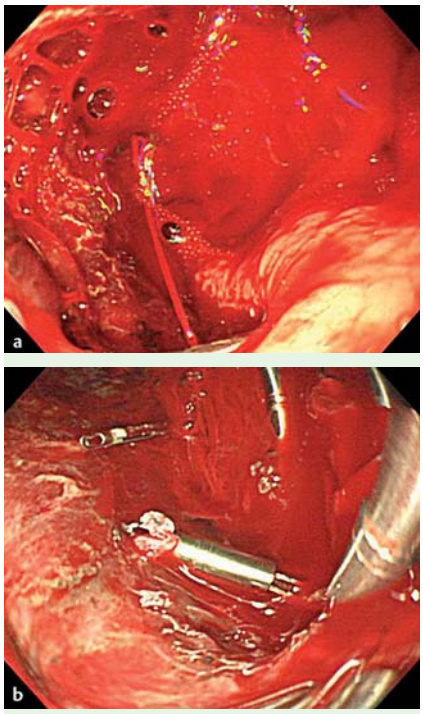

Fig. 2 **a** After ESD, a pumping artery was found. **b** Bleeding was controlled using hemoclips.

A 75-year-old female patient had been diagnosed with EGC. The patient had no specific medical history and blood tests were normal. ESD was performed on the second day of hospitalization (**Fig. 1**). At 4 hours after ESD, the patient showed hematemesis. Endoscopic bleeding was immediately controlled using hemoclips (**Fig. 2**). The following day, blood test results showed a decrease in platelet number (60 000/µL) and the international normalized ratio was increased to 1.8. Other results were fibrinogen 140 mg/dL and fibrin degradation product 32 µg/mL. Schistocytosis was observed on a peripheral blood smear (**Fig. 3**). The patient was diagnosed with DIC based on test results and clinical evidence. There was no additional bleeding and DIC improved under observation.

ESD has the advantage over surgery of less tissue damage. DIC is generally known to occur after serious tissue injuries. A combination of mechanisms, including release of fat and phospholipids from tissue into circulation, hemolysis, and endothelial damages, may promote the systemic activation of coagulation [2]. The interesting fact in this case is that DIC occurred after ESD, which is a procedure that causes relatively little tissue damage. Until now there has been no report of DIC after ESD. Another cause for DIC could be cancer itself; about 10 % – 15 % of patients with metastasized tumors have evidence of DIC [2]. However, there have been no reports of DIC in EGC

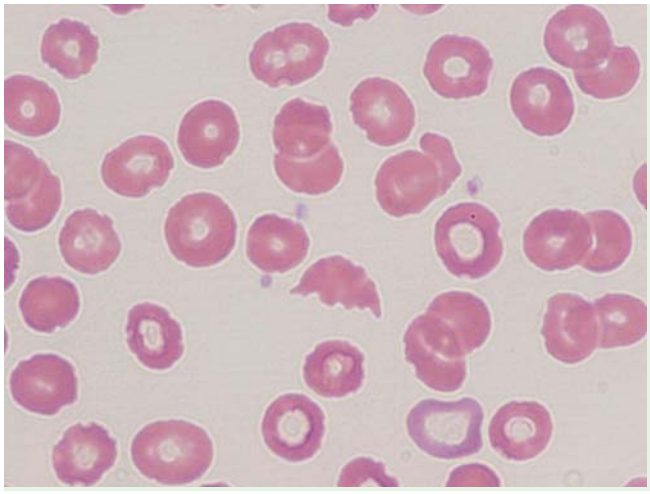

Fig. 3 Peripheral blood smear. Schistocytosis of red blood cells implicates disseminated intravascular coagulation.

either. Physicians must be aware of the possibility of severe complications, such as DIC, even after ESD.

Endoscopy_UCTN_Code_CPL_1AH_2AZ

S. H. Kang, J. I. Kim, E. M. Kim, H. S. Moon, S. H. Kim, B. S. Lee, J. K. Sung, H. Y. Jeong
Department of Gastroenterology and Hepatology, Chung Nam National University Hospital, Dae Jeon, Republic of Korea

References

1 *Gotoda T.* Endoscopic resection of early gastric cancer. Gastric Cancer 2007; 10: 1 – 11
2 *Levi M, Ten Cate Cate H.* Disseminated intravascular coagulation. N Engl J Med 1999; 341: 586

Bibliography
DOI 10.1055/s-0029-1214438
Endoscopy 2010; 42: E33 – E34

ISSN 0013-726X

Corresponding author
J. K. Sung, MD
Department of Gastroenterology and Hepatology
Chung Nam National University Hospital
Chung Nam University College of Medicine
Dae Jeon 301-721
Republic of Korea
Fax: +82-42-2544553
jksung69@cnuh.co.kr