Esophageal lesions in myeloproliferative neoplasms

Fig. 1 Upper gastrointestinal barium study of a 67-year-old man with worsening odynophagia showing several longitudinal ulcers in the middle to lower esophagus.

Fig. 2 Esophagogastroduodenoscopy showed multiple (a) longitudinal and (b) aphthoid ulcers, but no surrounding redness, white coat, or raised plaques in relation to the ulcers.

Fig. 3 Histological section (hematoxylin and eosin) showing intense infiltration of polymorphic neutrophils in the mucosa as well as the vascular wall. The biopsy specimen did not contain any microorganisms, inclusion bodies, gigantic cells, or granulomas.

Fig. 4 Both the (a) endoscopic appearance and (b) histopathological picture were improved after chemotherapy.

A 67-year-old man was admitted to our hospital with worsening odynophagia. He had been diagnosed as having chronic neutrophilic leukemia based on excessive neutrophilia without blasts, anemia, hyperplastic bone marrow with normal neutrophilic maturation, and hepatosplenomegaly, without bcr/abl rearrangement [1]. Finally, he was re-diagnosed as having myeloproliferative neoplasm (MPN), unclassifiable, according to the 2008 World Health Organization (WHO) classification [2]. In the 2 years after the diagnosis was made he was treated with hydroxyurea, interferon-alpha, Ara-C, and then VP-16. Laboratory studies revealed leukocytosis ($15.4 \times 10^9/L$, 69% mature neutrophils) without blasts, anemia (hemoglobin 10.2 g/dL), and thrombocytosis ($569 \times 10^9/L$). Fluoroscopy revealed several longitudinal ulcers in the middle to lower esophagus (● Fig. 1). Esophagogastroduodenoscopy showed multiple longitudinal and aphthoid ulcers (● Fig. 2). There were not specific lesions in the stomach, duodenum, and colon.

Histological examination revealed an intense infiltration of polymorphic neutrophils (mimicking the neoplastic cells detected in the bone marrow) in the mucosa as well as the vascular wall (● Fig. 3), indicating neoplastic cell infiltration to esophagus. Prednisolone 20 mg daily was prescribed in addition to VP-16, resulting

in improvement of the esophageal lesions (● Fig. 4).

Esophageal manifestations in leukemic patients include hemorrhagic lesions, leukemic infiltrates, and pseudomembranous and fungal esophagitis [3,4]. Although esophageal involvement was reported in 7.2% of 207 autopsied cases

with leukemia, only a few cases have been diagnosed antemortem [5]. Endoscopically, the lesions include shallow circular ulcers and erosive esophagitis. In addition, the autopsy review reported that esophageal leukemia was related to a high initial leukocyte count and usually associated with leukemic infiltration into other soft tissue/organs. Odynophagia and dysphagia in patients with leukemia are possibly caused by chemotherapy toxicity, infection, reflux, and benign strictures, however, esophageal leukemic infiltration should also be considered. Besides the longitudinal and aphthoid ulcers present in our case, endoscopic appearances may vary depending on the characteristics of the infiltrating neoplastic cells.

Endoscopy_UCTN_Code_CCL_1AB_2AC_3AB

Competing interests: None

**T. Sawada¹, Y. Adachi^{1,2}, Y. Ishii³,
H. Yasui², Y. Arimura², T. Endo¹**

¹ Division of Gastroenterology, Sapporo Shirakaba-dai Hospital, Sapporo, Japan

² First Department of Internal Medicine, Sapporo Medical University, Sapporo, Japan

³ Division of Pathology, Sapporo Shirakaba-dai Hospital, Sapporo, Japan

References

- 1 Yasui H, Adachi Y, Ishii Y et al. Mucormycosis as an etiology of cerebral hemorrhage in patients with chronic neutrophilic leukemia. *Am J Med* 2003; 115: 674–676
- 2 Tefferi A, Vardiman JW. Classification and diagnosis of myeloproliferative neoplasms: the 2008 World Health Organization criteria and point-of-care diagnostic algorithms. *Leukemia* 2008; 22: 14–22
- 3 Fulp SR, Nestok BR, Powell BL et al. Leukemic infiltration of the esophagus. *Cancer* 1993; 71: 112–116
- 4 Ebert E, Hagspiel KD. Gastrointestinal manifestations of leukemia. *J Gastroenterol Hepatol* 2012; 46 (1): 25–30
- 5 Prolla JC, Kirsner JB. The gastrointestinal lesions and complications of leukemias. *Ann Intern Med* 1964; 61: 1084–1103

Bibliography

DOI <http://dx.doi.org/10.1055/s-0031-1291754>
Endoscopy 2012; 44: E173–E174
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

Corresponding author

Y. Adachi

Division of Gastroenterology
Sapporo Shirakaba-dai Hospital
2-18 Tsukisamu-Higashi
Toyohira-Ku
Sapporo 062-0052
Japan
Fax: +81-11-852-8194
yadachi@sapmed.ac.jp