Successful endoscopic hemostasis for gastric arterial bleeding due to invasion of malignant lymphoma

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Abstract
A 75-year-old male with malignant lymphoma (ML) accompanied with gastric lesion was treated with combination chemotherapy. The patient produced tarry stool on the 4th d, and emergency gastroscopy showed arterial bleeding from the ulcer. Hemostasis was achieved by injecting pure ethanol and using hemostatic clips. There is only one previous report on endoscopic hemostasis being effective for bleeding due to gastric ulcer. Since gastric bleeding causes significant mortality, endoscopic hemostasis should be considered as first-line treatment for ML patients who were treated with chemotherapy.

Key words: Malignant lymphoma; Endoscopic hemostasis; Pure ethanol injection; Hemostatic clips

INTRODUCTION
Patients with stage I-II primary gastric lymphoma are commonly treated with chemotherapy alone or in combination with radiation therapy to avoid long-term sequelae after gastric resection [1, 2]. Although gastrointestinal bleeding during chemotherapy has been observed in only 3% of cases, it is a definite cause of mortality. However, only emergency gastrectomy may be able to rescue patients with neutropenia and thrombocytopenia after chemotherapy [3].

Endoscopic hemostasis has been established as a first-line treatment for acute bleeding in all patients with peptic ulcer. Among various methods employed, injection with pure ethanol or the use of hemostatic clips is one of the most effective treatments for achieving definitive hemostasis [4-8]. However, there has been only one report describing a case of successful endoscopic hemostasis for bleeding from lymphoma in the stomach. Here, we describe a case of successful hemostatic treatment for acute gastric bleeding due to invasion of lymphoma after standard chemotherapy. Although the patient was considered inoperable before chemotherapy, we managed to achieve hemostasis by injecting pure ethanol and using hemostatic clips.

CASE REPORT
A 75-year-old man was admitted to our hospital in January 2004 because of lumbar pain. Computed tomography detected a huge mass at the kidney and swelling of the paraaortic lymph nodes. The patient was diagnosed as having renal cell carcinoma with lymph node invasion and underwent surgical treatment in March. However, the swelling of the lymph nodes was histologically diagnosed as diffuse large B-cell lymphoma (DLBCL), and because of neutropenia and thrombocytopenia after chemotherapy, the patient was considered inoperable before chemotherapy. Our report concerns an elderly patient with gastric bleeding due to invasion of lymphoma after standard chemotherapy. Although the patient was considered inoperable before chemotherapy, we managed to achieve hemostasis by injecting pure ethanol and using hemostatic clips.
The condition had not changed since the previous examination in spite of the treatment with antipeptic agents. Ethanol injections (0.1 mL at a time) into the surrounding tissue close to the bleeding vessels, at a few injecting sites 2 mm from the bleeding vessels, suppressed the pulsatile bleeding, and definitive hemostasis was achieved with the concomitant use of hemostatic clips. During the following 2 weeks, the ulcerative lesions became smaller and no further bleeding was detected (Figure 3).

The second biopsy samples were histologically compatible with lymphoma.

**DISCUSSION**

This report concerns a patient with arterial bleeding from the stomach due to lymphoma invasion. We had considered surgical resection of the stomach before chemotherapy to avoid bleeding, but we performed chemotherapy as first treatment instead, because surgery was considered to carry serious risks. The reasons for these were that (1) the patient had previously undergone laparotomy for renal cell carcinoma and adhesion of viscera was suspected to be severe, (2) paraaortic lymph nodes were swollen making it difficult to create anastomoses for a gastroduodenostomy, and (3) lymphoma was expected to progress rapidly during recovery from the operation.

Because the mechanism of hemostasis is thought to consist of solidification caused by vascular shrinking resulting from the direct action of ethanol and degeneration of the vascular endothelial cells, there is good reason for attempting endoscopic hemostasis for bleeding due to lymphoma. We successfully achieved hemostasis with ethanol injection and clips, although the fundus of the ulcer remained fragile due to necrosis of the lymphoma after chemotherapy. Because lymphoma is curable with chemotherapy alone, endoscopic hemostasis should be considered as a first-line treatment for bleeding due to lymphoma.

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