A Case of Idiopathic Gastroesophageal Submucosal Hematoma and Its Disappearance Observed by Endoscopy

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Abstract: A 74-year-old man was hospitalized due to hematemesis. Upper gastrointestinal endoscopy revealed a very large and dark red mass in the cardiac region of the stomach that extended from the upper esophagus. A biopsy specimen showed hemorrhagic tissue and no malignant cells. The tumor-like region ulcerated at 5 days after the administration of intravenous lansoprazole at a dose of 30 mg twice a day and resolved with scar formation at 2 months after a change to oral rabeprazole at a dose of 10 mg/day. We diagnosed the patient with gastroesophageal submucosal hematoma. Gastroesophageal submucosal hematoma is a rare complication. In this case, we could follow the process of its disappearance by endoscopy.

Keywords: esophagus, stomach, submucosal hematoma.

Introduction

Gastroesophageal submucosal hematoma is a relatively rare disease, a spontaneous type of esophageal submucosal hematoma that involves hemorrhage and hematoma formation due to a rupture of blood vessels in the submucosal layer [1]. In the stomach, vessel fragility with external factors was considered to lead to submucosal bleeding and hematoma formation. Increase of bleeding tendency due to antiplatelet or anticoagulant therapy was also considered to be involved in the pathogenesis of submucosal hematoma [2]. We encountered a case of gastroesophageal hematoma in which we could follow the process of its disappearance by endoscopy.

Case report

A 74-year-old man was admitted to our hospital due to nausea and hematemesis in 2010. He had been treated for cerebral infarction with aspirin for 5 years and treated for chronic hepatitis C for 20 years. His blood pressure was 140/84 mmHg, heart rate was 88/min regular, and body temperature was 37.7°C. The bulbar conjunctivae were slightly anemic. The abdominal region was flat. He had no pain or tenderness in the abdominal region. The results of blood test on hospitalization revealed findings of inflammation and anemia. The prothrombin time and activated partial thromboplastin time were within the normal ranges (Table 1). The patient underwent upper gastrointestinal endoscopy, which revealed a very large and dark red mass in the cardiac region of the stomach that extended...
from the upper esophagus. Extensive esophagitis with mucosal friability and a column with intraluminal bulging from the upper esophagus to the gastroesophageal junction were also observed. The large mass in the cardiac region was clearly margined and had a sharply rising edge. Because the gastroesophageal mucosa was blackly pigmented, endoscopic findings suggested a tumor such as malignant melanoma at first (Fig. 1). The differential diagnoses were gastroesophageal submucosal hematoma, gastric varices, tumor or extrinsic mass compression. His general condition was good and we observed him by supportive care. Aspirin was discon-
tinued and a proton pump inhibitor was administered. After 5 days fasting, upper gastrointestinal endoscopy showed disappearance of the dark red mass in the cardiac region, and active stage ulcerations with mucosal edema were observed. The mass in the esophagus disappeared and turned into a longitudinal ulcer (Fig. 2). Endoscopic ultrasonography for intraluminal bulging of the lower esophagus revealed hypoechoic region from the first to third layers using a 20 MHz miniature probe on day 12 (Fig. 3). A biopsy specimen showed hemorrhagic tissue and no malignant cells. Meals were started and the patient was discharged from the hospi-

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<th>Table 1. Laboratory data on admission</th>
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<td><strong>Hematology</strong></td>
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<td>WBC 14,000 /μl</td>
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<tr>
<td>Neutro 84.5%</td>
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<td>Eos 0.8 %</td>
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<tr>
<td>Baso 0.1 %</td>
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<td>Lymph 8.7 %</td>
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<td>Mono 5.9 %</td>
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<tr>
<td>RBC 300 × 10⁶ /μl</td>
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<td>Hb 9.5 g/dl</td>
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<td>MCV 95 μm³</td>
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<td>PLT 15.0 × 10⁴ /μl</td>
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Fig. 1. Endoscopic findings of the esophagus and stomach at admission. A: Dark red mass in the cardiac region of the stomach was observed, B: The mass extended from the stomach to the upper esophagus, C: The arrows show blackly pigmented mucosa of the esophagus.
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tal on day 20. Endoscopic examination after 2 months revealed an ulcer scar, which suggested a benign ulcer (Fig. 4). The tumor-like lesion was spontaneously regressed to a scarred lesion after the administration of a proton pump inhibitor. Therefore we diagnosed the patient with gastroesophageal submucosal hematoma. He resumed taking his medications, including aspirin, without recurrence of hematoma.

Fig. 2. Endoscopic findings of the esophagus and stomach at 5 days after the admission. A: The large mass in the cardia was flattening and ulceration was observed, B: The mass in the esophagus disappeared and turned into the longitudinal ulceration, C: Blackly pigmented mucosa of the esophagus had almost disappeared.

Fig. 3. Endoscopic ultrasonography for intraluminal bulging of the lower esophagus at 12 days after the admission. Endoscopic ultrasonography was performed using a 20 MHz miniature probe. A: Endoscopic findings revealed intraluminal bulging of the lower esophagus, B: Endoscopic ultrasonography revealed consecutive hyperechoic region from first to third layers.

Fig. 4. Endoscopic findings of the esophagus and stomach at 2 month after the onset. A: Ulcer scar was observed in the cardia, B: The scar extended from the cardia to the upper esophagus, C: Blackly pigmented mucosa of the esophagus had disappeared completely.
Discussion

Gastroesophageal submucosal hematoma is a rare disease. We searched for reports of gastric submucosal hematoma, and a search of PubMed revealed 7 cases from 2000 to 2013 [3–9].

Esophageal submucosal hematoma, Mallory-Weiss tear, and Boerhaave’s syndrome are classified as acute mucosal injury of the esophagus [10]. Among these disorders, Mallory-Weiss tear is most frequently observed. It can be endoscopically treated and serious conditions are rare. Boerhaave’s syndrome causes severe thoracic pain, and often induces septic shock, requiring emergency surgery [11]. Among the three types of acute mucosal injury, esophageal submucosal hematoma, excluding that after sclerotherapy for varices [12], is relatively rare [13, 14]. Esophageal submucosal hematoma is classified into spontaneous and traumatic types [1]. The spontaneous type involves hemorrhage and hematoma formation due to rupture of blood vessels in the submucosal layer as a result of a sudden increase in pressure due to factors such as nausea and vomiting, or coagulation abnormalities [10]. Traumatic type is attributed to factors such as contaminants, endoscopy and bougie. The clinical picture in cases of esophageal hematoma is usually dominated by severe chest pain [15, 16]. Many patients eventually complain of dysphagia and have hematemesis, which can help the clinician to consider the esophageal diseases [10]. The most common location of the hematoma is in the distal esophagus (83% cases), which is the portion least supported by surrounding structures. However, long segment involvement is common—the mid-esophagus is involved in 68% and the proximal esophagus is involved in 27% of the cases [16].

Gastric submucosal hematomas are associated with underlying diseases that promoted bleeding, including idiopathic thrombocytopenic purpura (ITP) [17] and amyloidosis [8, 11, 18]. As to the mechanism, vessel fragility with external factors is considered to lead to submucosal bleeding and hematoma formation. An increase of bleeding tendency due to antiplatelet or anticoagulant therapy is considered to be involved in the pathogenesis of submucosal hematoma [2]. The present case had the features of an esophageal and gastric submucosal hematoma. Although the exact etiology of this condition remains uncertain, it was suggested that the vessel was ruptured by a sudden increase in pressure due to nausea, and the hematoma was enlarged by continuous bleeding with the antiplatelet effect of aspirin.

When the mucous membrane covering the hematoma peels away, a shallow ulcer forms over a wide area and the ulcer scars appears after about one month [19]. The prognosis of submucosal hematoma is good, and improvement is achieved by conservative treatment in many patients.

In conclusion, we report a gastroesophageal submucosal hematoma in which we could follow the process of its disappearance by endoscopy. Although this is a rare case and we suspected a tumor at first, we could conclude gastroesophageal submucosal hematoma by following the process. Treatment is generally conservative and prognosis is usually favorable. As life expectancies rise, people taking antiplatelet agents and anticoagulants are increasing. Thus, physicians should be aware of this rare condition.

References

内視鏡にて消褪経過を観察し得た特発性胃食道粘膜下血腫の1例

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要 旨：症例は74歳男性、吐血を主訴に当科入院となった。上部消化管内視鏡検査にて胃噴門部に暗赤色の巨大腫瘤を認め、腫瘤は上部食道へ連続していた。生検では血液成分を認めのみで、悪性所見は指摘できなかった。ランソプラゾール30 mgの1日2回の静注投与開始後、5日間で腫瘤は潰瘍を形成した。以後はラベプラゾール10 mgの1日1回の経口投与へ変更し、2か月後に瘢痕化した。保存的加療のみにて腫瘤の消褪を認めたことから、我々は本例を胃食道粘膜下血腫と診断し得た。胃食道粘膜下血腫は比較的まれな症例であるが、本症例では内視鏡にてその消褪経過を観察することが可能であった。

キーワード：食道、胃、粘膜下血腫。

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