A case of cardiac tamponade following esophageal resection

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Abstract
We report a rare case of cardiac tamponade after esophageal resection for esophageal cancer. A 69-year-old man underwent subtotal esophagectomy and reconstruction of the gastric tube with cervical anastomosis via the poststernal route and three-field lymphadectomy via a median sternotomy. On postoperative day 4, the patient developed dyspnea, chest oppression, and hemodynamic instability due to cardiac tamponade. Emergency percutaneous catheter drainage was performed to manage the cardiac tamponade. Acute pericarditis due to the original surgical procedure was suspected to be the cause of the tamponade. Although rare, cardiac tamponade should be considered as a cause of hemodynamic instability after esophageal resection.

Key words Esophageal carcinoma · Pericarditis · Complication

Introduction
Early detection combined with esophageal resection and three-field lymph node dissection offers the best chance for long-term survival in patients with esophageal carcinoma [1]. However, esophagectomy with esophageal reconstruction is associated with many fatal complications, including infection, anastomosis leakage, and respiratory and hemodynamic problems. We have documented a rare case of cardiac tamponade caused by acute pericarditis following esophagectomy.

Case report
A 69-year-old man with no previous contributing medical history was scheduled for subtotal esophagectomy.
including acid-fast bacillus (tuberculosis), was negative; and cytological findings were normal. After the pericardiocentesis, the patient experienced complete relief of symptoms, and the remaining course of hospitalization was uneventful. He recovered without further complications and was discharged on postoperative day 24. At 7 months following discharge, the patient remained in good health.

Discussion

The most frequent causes of spontaneous pericardial tamponade are neoplastic invasion, idiopathic or infectious pericarditis, and uremia. Both penetrating and nonpenetrating trauma are also well-recognized causes of cardiac tamponade [2,3]. Esophagectomy with reconstruction of the esophagus is associated with many fatal complications, such as infection, anastomosis leakage, and respiratory and hemodynamic problems; however, cardiac tamponade following esophagectomy is rare. Kitamura et al. reported only one patient in 277 cases who suffered cardiac tamponade after surgery for thoracic esophageal carcinoma [4]. Levitt et al. reported a case of intraoperative cardiac tamponade complicating esophagogastric resection [5]. Fukumoto et al. reported cardiac tamponade in an esophagectomy patient resulting from a gastric ulcer caused by a gastric tube [6].

The patient we reported revealed the typical signs of acute cardiac tamponade: a decrease in arterial blood pressure, an increase in central venous pressure, and a small, quiet heart. These symptoms are primarily seen with acute, rapidly progressing cardiac tamponade that results from trauma. It is difficult to think that laceration of the pericardium occurred during surgery. Furthermore, analysis of the pericardial effusion and pleural effusion revealed that the lactate dehydrogenase and glucose values were markedly different. Also, the negative serum analysis ruled out pericarditis due to viral or acid-fast bacillus (tuberculosis) infection. Thus, we believed the cause might be acute pericarditis due to the surgical procedure itself. Proper analysis of simultaneously aspirated pleural effusion and pericardial fluid, as well as venous hematocrit, oxygen content, and coagulation studies, may clarify the pathogenesis [7]. We believe that, though rare, cardiac tamponade should be considered as a cause of hemodynamic instability after esophageal resection.

References

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