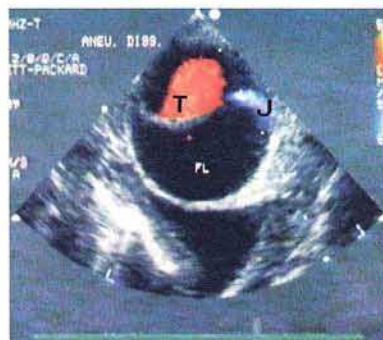
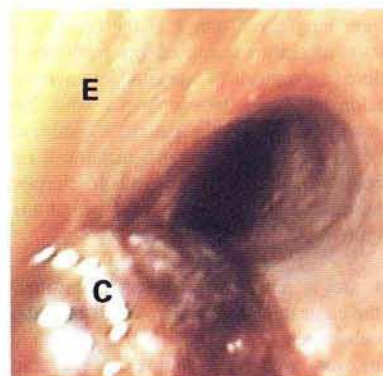


### A Rare Case of Gastrointestinal Hemorrhage: Aorto-esophageal Fistula Following Repair of Aortic Dissection

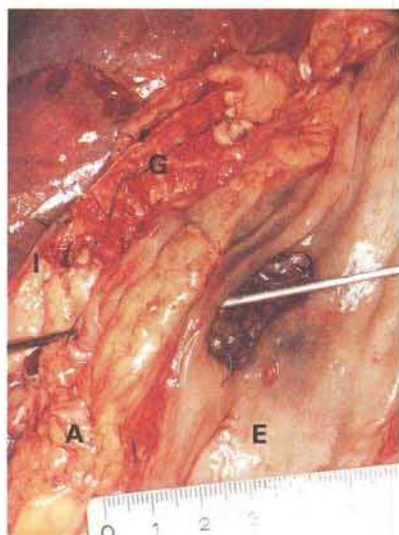
A 45-year-old man was admitted due to acute and severe chest pain. Immediate magnetic resonance imaging showed a dissecting aneurysm of the descending aorta, and transesophageal echo cardiography demonstrated the dissecting membrane. The jet between the true and the false lumen, visualized by color flow mapping, proved the presence of an intimal tear (Figure 1). Despite medical treatment, the patient remained highly symptomatic. A prosthetic aortic graft was therefore performed. At day 25 after surgery, the patient unexpectedly developed hematemesis and hypovolemic shock. After hemodynamic stabilization, emergency gastroscopy was performed. Following cautious irrigation and suction, a recess with an adherent clot was discovered on the dorsal wall of the mid-esophagus, about 3 cm in diameter (Figure 2). The lesion was not actively bleeding at the time of endoscopy. As an aorto-esophageal fistula was suspected, no attempt was made to remove the clot or to carry out any endoscopic hemostatic therapy. Immediate surgery was considered to be the last resort in this critical situation. Unfortunately, the patient died from exsanguination soon after the gastroscopy. The existence of the aorto-esophageal fistula was proved at autopsy (Figure 3). Histologically, the etiology of the aortic dissection was idiopathic medionecrosis (Erdheim's disease). Graft infection was excluded. Fistulas between dissecting aortic aneurysms or prosthetic aortic grafts and the upper gastrointestinal tract are rare causes of acute upper gastrointestinal bleeding (1). Svensson et al. (2) reported seven patients developing aorto-esophageal fistulas, all with a lethal outcome, among 832 patients undergoing repair of the descending thoracic aorta. Aorto-esophageal fistulas clinically present with midthoracic pain, sentinel arterial hemorrhage, and final exsanguination after a variable symptom-free interval (Chiari's triad). Hematemesis after prosthetic aortic grafting can be caused by an aortic fistula. Once suspected, emergency



**Figure 1:** Transesophageal echo cardiography, showing a transection of the descending thoracic aorta. There is a dissecting membrane separating the true (T) and false (FL) lumen. The systolic color jet (J) demonstrates the site of an intimal tear.



**Figure 2:** Emergency gastroscopy, showing a recess with an adherent clot (C) in the mid-esophagus (E), leading to a suspicion of aorto-esophageal fistula.



**Figure 3:** At autopsy, the aorto-esophageal fistula was detected with a metal probe. There is ulceration of the esophagus (E). A: descending aorta, G: prosthetic aortic graft.

gastrosocopy is mandatory (1,3). The endoscopic features of aorto-esophageal fistula can include intramural hematoma, a pulsating submucosal mass with adherent blood clots, ulcerated mucosa, and even an external compression of the esophagus. Biopsy or any endoscopic intervention is contraindicated in suspected fistulae (3). The first successful operation on an aorto-esophageal fistula was reported in 1983 (4). The literature (4,5) shows that prompt surgery offers the only chance of survival, but rarely succeeds. The present case report shows the importance of immediate endoscopic diagnosis of aorto-esophageal fistula, but the symptom-free interval may be too short for surgery to be started even on an emergency basis.

A. Kirchgatterer, C. Punzengruber, R. Zisch, R. Balon, P. Knoflach  
Dept. of Gastroenterology, Dept. of Cardiology, Second Dept. of Radiology, First Dept. of Pathology, General Hospital, Wels, Austria

#### References

1. Peterson WL. Gastrointestinal bleeding. In: Sleisenger MH, Fordtran JS, editors. Gastrointestinal disease. Philadelphia: Saunders, 1989; 410-1.
2. Svensson LG, Crawford ES, Hess KR, et al. Variables predictive of outcome in 832 patients undergoing repairs of the descending thoracic aorta. *Chest* 1993; 104: 1248-53.
3. Sosnowik D, Greenberg R, Bank S, et al. Aorto-esophageal fistula: early and late endoscopic features. *Am J Gastroenterol* 1988; 83: 1401-4.
4. Snyder DM, Crawford ES. Successful treatment of primary aorto-esophageal fistula resulting from aortic aneurysm. *J Thorac Cardiovasc Surg* 1983; 85: 457-63.
5. Bogey WM, Thomas JH, Hermreck AS. Aorto-esophageal fistula: report of a successfully managed case and review of the literature. *J Vasc Surg* 1992; 16: 90-5.

#### Corresponding Author

A. Kirchgatterer, M.D.  
Dept. of Gastroenterology  
Krankenhaus der Barmherzigen Schwestern  
Grieskirchnerstrasse 42  
4600 Wels, Austria  
Fax: +43-72 42-4 96-39 86