

Brief clinical history :

A 76-year-old male presented at our emergency department (ED) due to vomiting with coffee-ground material. Initial hypotension (88/64 mmHg) was noted, and recovery after N/S challenge 1000ml. Laboratory study was hemoglobin 12.2 g/dL. However, his panendoscopy showed just small gastric ulcers with much food debris and coffee ground material. After admission, panendoscopy was done again at next day, and still no active bleeder was noted. After treatment with Tranexamic acid and Pantoprazole, he was discharged under stable condition.

However, in two months later, he was sent to our ED due to vomiting with much blood again and shock (78/46 mmHg) while arrival. This time, he complained mild epigastric pain and a palpable mass on upper abdomen. An abdominal aortic aneurysm was suspected in his bedside ultrasound image. Abdominal computed tomography showed infrarenal abdominal aortic pseudoaneurysm closed to duodenum, and much blood clot in stomach and duodenum (Figure 1). Fistula formation between aorta and duodenum was suspect. He received emergency aortic stent graft immediately and discharged in 10 days later.

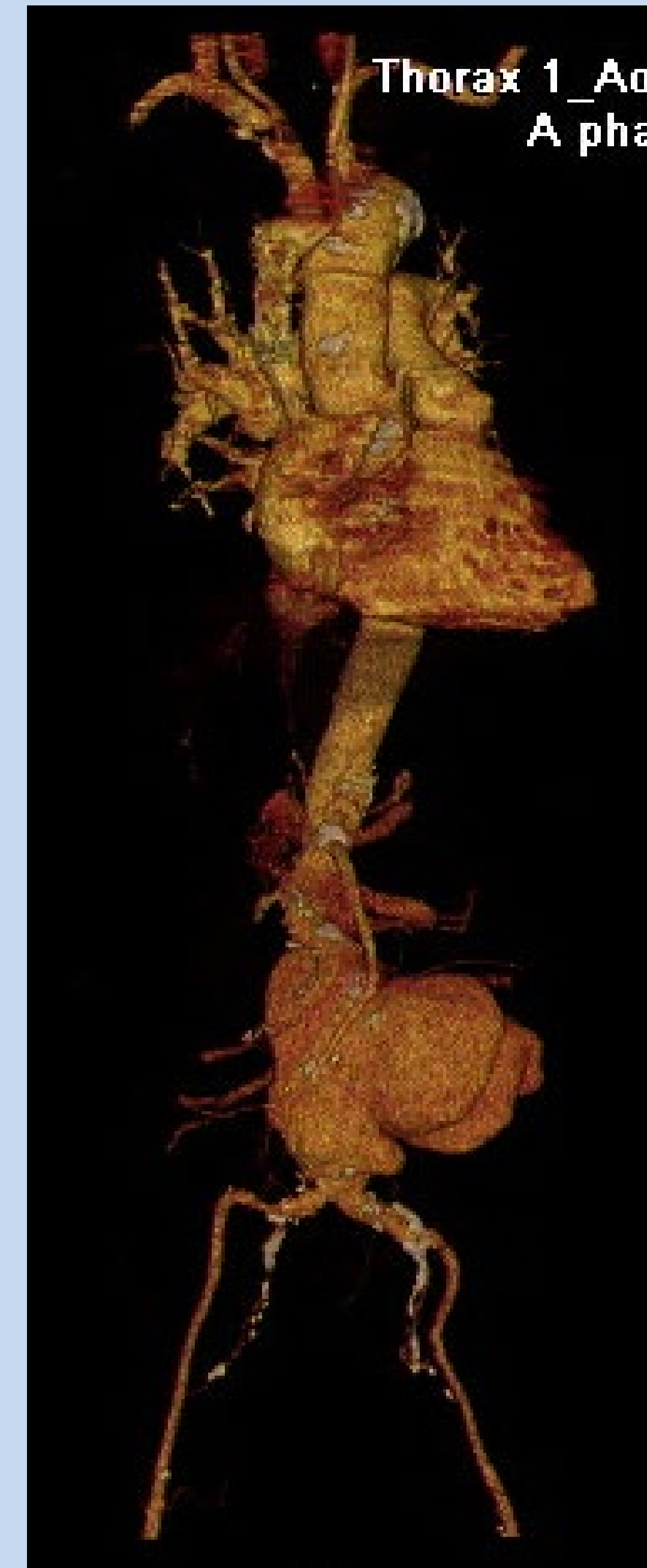


Figure 1. Infrarenal abdominal aortic pseudoaneurysm closed to duodenum.

Misleading elements :

This patient vomited with coffee-ground material, and his panendoscopy showed gastric ulcers. The symptoms improved after treatment with Tranexamic acid and Pantoprazole. Therefore, he was diagnosed with upper gastrointestinal (GI) bleeding at the first time he visited our hospital.

Helpful details :

This patient had recurrent hematemesis and in the absence of evident endoscopic findings. In his second visitation, he had upper GI bleeding, epigastric pain and a palpable mass on upper abdomen, which were classic triad of aortoenteric fistula.

Differential and actual diagnosis :

Aortoenteric fistula(actual diagnosis), Gastric ulcer with bleeding, Duodenal ulcer with bleeding.

Educational and/or clinical relevance :

Aortoenteric fistula was distinguished into two types: primary aortoenteric fistula (PAEF), and secondary aortoenteric fistula (SAEF), which can occur following any aortic reconstruction. Abdominal aortic aneurysm is the major risk factor of PAEF and 75% of PAEF involve the duodenum, especially in the 3rd and 4th portions, which are most closed to aorta. The classic triad including gastrointestinal bleeding, abdominal pain, and palpable mass occurs in only 6-12% of patients with PAEF, and GI bleeding is the most common presentation. However, the sensitivity of upper GI endoscopy for diagnosing AEF is only 50%. Upper GI endoscopy can't find the bleeder due to probably plugging the fistula by thrombus formation and/or spasm of intestinal wall around the fistula. Patients usually present intermittent herald bleeding, with subsidence interval from hours to months, until the catastrophic hemorrhage arrive. In such challenge cases, presence of some clinical clues, such as recurrent hematemesis and in the absence of evident endoscopic findings, may hold important values in the diagnosis.