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CASE REPORT: AORTOENTERIC FISTULA PRESENTING AS REPEATED HEMATOCHEZIA

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□ **Abstract—Background: Aortoenteric fistula (AEF) is a rare but life-threatening condition in which expedient diagnosis is often difficult. It arises from erosion of a segment of aorta, usually an abdominal aortic aneurysm, into an adjacent portion of the gastrointestinal tract or between a vascular graft of the aorta and an adjacent portion of the gastrointestinal tract. It can present as life-threatening upper or lower gastrointestinal bleeding and is a surgical emergency that requires rapid assessment, emergency resuscitation, and definitive treatment. Case Report: To present the case of an 87-year-old man diagnosed with AEF in the emergency department. A review of the literature follows the case report. Conclusions: Aortoenteric fistula is a rare diagnosis that can cause sudden life-threatening gastrointestinal bleeding. © 2012 Elsevier Inc.**

□ **Keywords—aortoenteric; fistula; hematochezia**

INTRODUCTION

We present a case of an elderly man who was brought in for recurrent hematochezia. The diagnosis of aortoenteric fistula (AEF) was made. Case management and a review of the literature are then presented.

CASE REPORT

Prehospital Care

An 87-year-old man presented to the emergency department (ED) from his home via paramedics. He reported an episode of a large volume of bloody stool associated with near syncope while on the toilet, followed by a fall during which he sustained a forehead laceration. He denied loss of consciousness and was awake and alert on paramedic arrival. Paramedics reported a large volume of blood on the patient's bathroom floor, estimated at several hundred milliliters. The patient was initially hypotensive in the field, with a systolic blood pressure of 75 mm Hg by palpation and a pulse of 65 beats/min. The paramedics established venous access and gave the patient a fluid bolus that had totaled 700 cc of 0.9% normal saline by the time of arrival. In the ED, the patient's arrival blood pressure was 115/85 mm Hg, with a pulse of 72 beats/min.

ED Presentation

Initial history reflected that the patient came to the ED only at the insistence of his wife. He confirmed the report of the paramedics. Additional history obtained included that the patient had a similar episode of hematochezia approximately 2 weeks prior, but had not sought medical attention until now. He did not pass out at that time, but was dizzy for a period after the episode. He denied intercurrent rectal bleeding or melenotic stools. He denied hematemesis, abdominal pain, or weight loss. Additional review of systems was negative for fevers, chills, sweats, nausea, vomiting, chest pain, shortness of breath, orthopnea, dyspnea on exertion, bleeding gums, hema-

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turia, easy bruising, headache, visual changes, or focal weakness or numbness.

The patient's past medical history was notable for an uncomplicated abdominal aortic aneurysm repair approximately 8 years earlier. He had a history of hypertension, with his usual systolic blood pressure in the range of 140–150 mm Hg. The patient's sole medication was an antihypertensive agent, which he was unable to recall. He denied taking any anticoagulants or antiplatelet agents. He had undergone routine colonoscopy approximately 5–6 years earlier that he was told was normal.

Physical examination revealed an alert conversant elderly man in no obvious distress. His initial ED vital signs were: temperature of 37.1°C (98.8°F), blood pressure 115/85 mm Hg, pulse of 72 beats/min, respiratory rate of 18 breaths/min, and an oxygen saturation of 98% on 2 L oxygen by nasal cannula. Notable findings included a small 1.5-cm laceration on the right forehead, not bleeding at the time of evaluation. His sclerae were anicteric. The rest of his head examination was unremarkable. His neck, lungs, heart, extremity, and neurological examinations were normal. The abdominal examination revealed a large well-healed midline laparotomy scar. The abdomen was nontender without palpable masses, abnormal pulsations, or organomegaly. There were no rebound, guarding, or peritoneal signs. Digital rectal examination revealed blood mixed with stool that was confirmed with positive hemoccult testing. Anoscopy revealed no obvious bleeding source and no stool in the rectal vault. There was no active or ongoing bleeding at the time of anoscopy.

ED Course

The patient agreed to have diagnostic studies performed, but stated emphatically that he would not undergo any interventions, such as surgery. His wife was present and confirmed these statements to be consistent with his wishes over the last several months. Initial laboratory studies, including complete blood cell count, comprehensive metabolic panel including liver function tests, coagulation studies, and a type and cross-match for four units of packed red blood cells, were sent. A second large-bore intravenous catheter was placed.

Urgent consultation with a radiologist was obtained given concern for a possible AEF. Although the patient was relatively hypotensive in the ED, his vital signs had remained stable without examination evidence of continued bleeding. A non-contrast computed tomography (CT) scan of the abdomen was obtained as the patient was in acute renal failure.

The patient's laboratory findings were: electrolytes normal except for a bicarbonate of 20 mmol/L. His blood urea nitrogen was 45 mg/dL, creatinine 3.7 mg/dL, and glucose 158 mg/dL. His liver function tests were normal. White blood cells were 10.3 K/uL, hemoglobin 7.2 G/dL, hematocrit 21.6%, platelets 129 K/uL, mean corpuscular volume 89 fL. Partial thromboplastin time was 29 s, prothrombin time 15 s, and international normalized ratio 1.49.

Upon the patient's return to the ED from the Radiology suite, he developed a diminished level of consciousness with massive hematemesis. Vital signs revealed a blood pressure of 75/40 mm Hg and pulse of 90 beats/min. Previously ordered packed red blood cells were immediately available and the patient was emergently transfused. He additionally received boluses of normal saline. The patient's vital signs improved to a blood pressure of 100/50 mm Hg, with a pulse of 85 beats/min. The patient's mental status improved to baseline. An Ewald tube was placed, with return of 800 mL of blood over the course of the next 10 min.

During this time, the radiographic report was obtained, with results consistent with AEF (Figures 1). Emergent vascular surgery consultation was obtained in the ED. Given the patient's continued refusal to undergo surgery and the poor surgical risk, the patient was provided comfort care only and admitted to the floor.

Hospital Course

Ultimately, the patient's clinical condition stabilized and he agreed to undergo esophagogastroduodenoscopy

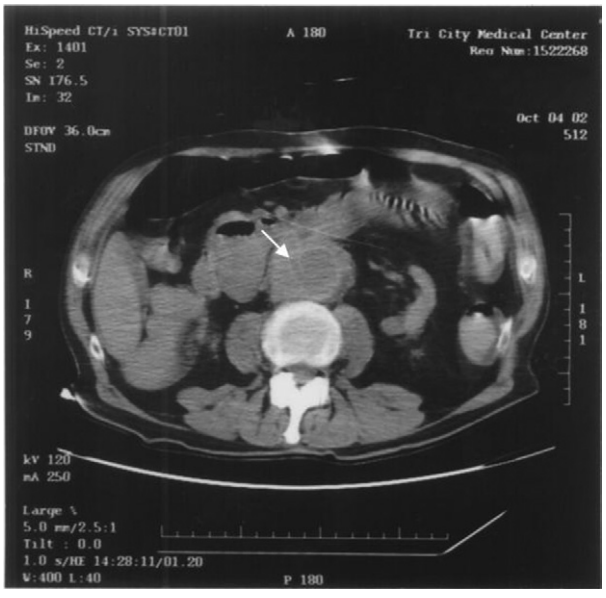

Figure 1. Marked tortuosity of the aorta is present. An aortic stent is in place with dissection flap (arrow). There is a loss of the fat plane between the aorta and the duodenum with reconstitution of this tissue plane inferiorly. These findings are consistent with the clinical diagnosis of aortoenteric fistula.