

# Case of the Month

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**FIGURE 1**  
The patient's GI tract  
as seen via EGD

## CASE

The patient is a 62-year-old white female who presented to our clinic with chest pain, indigestion, and diarrhea. She was not physically active, and she resided in an adult home for the mentally impaired.

**History** The patient was accompanied by a case worker and unable to give a medical history. Notes from the adult home indicated that she had mental retardation, type 2 diabetes, and seizures. Medications included phenytoin, phenobarbital, iron supplements, metformin, ropinirole (Requip), pioglitazone (Actos), and valproic acid (Depakote). Recently, the patient had taken ibuprofen, loperamide (Imodium), Alka-Seltzer, and Mylanta nearly daily to treat her symptoms. Her case worker reported that the patient had complained of chest discomfort, sore throat, cough, and diarrhea, which had increased over the past few weeks. Most recently, she had started taking omeprazole (Prilosec) daily as prescribed by her primary care physician. When this medication failed to relieve symptoms, she was referred to us for further evaluation and management.

**Physical examination** The patient had a 4/6 systolic ejection murmur and 3+ pitting edema bilaterally to her mid-calf, although her medical records indicated no history of heart disease or

murmur. An immediate referral to cardiology was made, and laboratory tests and esophagogastroduodenoscopy (EGD) were ordered (see Figure 1). The omeprazole dosage was increased to twice a day.

## WHAT IS YOUR DIAGNOSIS?

- *Gastroesophageal reflux disease (GERD)*
- *Heart failure*
- *Valvular heart disease*

## DISCUSSION

The correct diagnosis is all of the above. Cardiology performed a Cardiolute (technetium Tc99m sestamibi) stress test, which was terminated after 1 minute because of chest pain during exercise. No significant changes were noted on ECG. Echocardiography showed severe aortic stenosis and an ejection fraction of 50%. Cardiac catheterization—the definitive diagnostic procedure for aortic stenosis—confirmed this finding, with an aortic valve area of 0.7 cm<sup>2</sup>. A valve area of 0.7 cm<sup>2</sup> or less defines critical aortic stenosis, with a normal valve area being 3 cm<sup>2</sup>. Aortic stenosis manifests as angina, syncope, and signs of heart failure such as left ventricular hypertrophy, shortness of breath, and lower-extremity edema. A cardiothoracic surgeon determined that the patient needed mechanical aortic valve replacement, which took place 1 month later.

Before the surgery, EGD showed gastritis with evidence of GERD. Usually caused by lower esophageal sphincter dysfunction, GERD manifests as regurgitation of the stomach contents into the esophagus. Spicy foods, caffeine, alcohol, peppermint, and certain medications such as NSAIDs commonly exacerbate symptoms. Atypical manifestations include chest pain or pressure, chronic cough, hoarseness, sore throat, and globus sensation.

EGD is not sensitive in diagnosing reflux but can demonstrate the resultant damage to the esophagus and stom-

ach. A 24-hour ambulatory pH test is a suitable diagnostic test, but it is invasive, expensive, and often unavailable. Clinically, GERD can be diagnosed if a patient experiences relief from medication. OTC products reduce the symptoms of GERD by neutralizing acid and may offer temporary relief. H<sub>2</sub>-blockers and proton pump inhibitors (PPIs) reduce the production of stomach acid. PPIs such as omeprazole are the most effective treatments available for providing long-term relief, healing, and control of symptoms.

**Outcome** Three months after her first visit, the patient had experienced complete relief of her symptoms. She had minor complications after surgery and was admitted to the hospital for pulmonary edema and an international normalized ratio (INR) greater than 6.0 after initiation of warfarin treatment. She was treated with furosemide (Lasix) and fresh frozen plasma and was later discharged with a stabilized INR within the therapeutic range. The GERD symptoms were relieved with omeprazole, 20 mg daily, and dietary modifications, and the diarrhea resolved after treatment.

**Comment** Obtaining an accurate medical history can be difficult, especially when the patient has a mental disability. This patient had been evaluated on several occasions with similar complaints and had been treated for months by the adult home with OTC medications. The cardiac symptoms were likely overlooked because the patient could not provide an accurate history and because the symptoms of reflux mimicked those of aortic stenosis. Once a diagnosis was made and appropriate management instituted, the patient responded well and now has an overall good prognosis. **JAAPA**

Marie Wiles works in a private internal medicine practice in South Hill, Virginia. She has indicated no relationships to disclose relating to the content of this article.

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