A 51-year-old woman presented with significant weight loss and right upper quadrant abdominal pain. A computed tomography scan of the abdomen showed a large mass in the right lobe of the liver, with involvement of the right hemidiaphragm and right lower lobe of the lung (Figure 1A). A biopsy revealed poorly differentiated adenocarcinoma. The patient was referred to M.D. Anderson Cancer Center for treatment.

During the hospital stay, the patient had intermittent high-grade fever, thrombocytopenia, prolonged prothrombin time and partial thromboplastin time, and elevated D-dimer and fibrinogen levels; all these symptoms are consistent with paraneoplastic chronic disseminated intravascular coagulation. Antibiotics were administered empirically after various cultures, including 3 blood cultures, were obtained. A transesophageal echocardiogram revealed extensive vegetations involving both leaflets of the mitral valve (Figure 2A). Because all cultures were negative, antibiotics were discontinued and a diagnosis of nonbacterial endocarditis (NBTE) was made. The patient underwent complete surgical resection of the tumor (hepatectomy), including en-bloc resection of the right hemidiaphragm and wedge resection of the lower lobe of the right lung (Figure 1B). The fever and hematological abnormalities resolved promptly after surgery. The postoperative course was uncomplicated, with hospital discharge on the seventh postoperative day. A transesophageal echocardiogram performed 4 weeks later revealed complete resolution of the vegetations (Figure 2B).

In a prospective study of 200 patients with solid tumors, the echocardiographic prevalence of NBTE was 19%, with predominant mitral valve involvement. NBTE is typically seen in patients with advanced and incurable malignancy. To our knowledge, this is the first documented case of echocardiographic resolution of NBTE.

Reference

Figure 1. Computed tomography scans of right hepatic lobe tumor involving diaphragm before (A) and after (B) resection.

Figure 2. Two-dimensional transesophageal echocardiographs showing mitral valve with vegetations before hepatic resection (A) and resolution of vegetations after surgery (B).
Resolution of Nonbacterial Endocarditis After Surgical Resection of a Malignant Liver Tumor
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