Fever, dyspnea and chest pain with pericardial effusion

A 55-year-old female patient was referred to our cardiology department for evaluation of pericardial effusion. On admission, she had complaints of fatigue, fever, progressive dyspnea and chest pain for two months. On physical examination the blood pressure was 100/60 mmHg and the body temperature was 38.8°C. Her chest-X ray revealed an increased cardiothoracic ratio and 12-lead ECG showed low voltage with a heart rate of 100 beat/min. Routine laboratory revealed normochromic normocytic anemia with a sedimentation rate of 75 mm/hr. The white cell count was 13,000 /mm³. Blood and urine cultures were negative. The transthoracic echocardiography (TTE) showed a moderate circumferential pericardial effusion with a 2.5x2.3 cm sized cardiac mass adherent to the right atrium in the subcostal view (Fig. 1A, B). The transesophageal echocardiography (TEE) confirmed the mass with a greater size, attached to lateral wall of the right atrium, extending along both superior and inferior vena cava wall (Fig. 2A, B). A cardiac magnetic resonance imaging (MRI) was done for the accurate assessment of tumor extend and infiltration to the cardiac and vascular structure. On the fifth day of hospital admission with worsening of dyspnea, an emergent pericardiocentesis was performed and 800 ml of hemorrhagic fluid was removed. Analysis of the pericardial fluid was negative for bacteria, acid-alcohol resistant bacilli and neoplastic cells.

What is your diagnosis?
1. Tuberculous pericarditis
2. Primary cardiac angiosarcoma
3. Behçet’s disease with thrombosis
4. Vegetations

Figure 1. Transthoracic echocardiography reveals pericardial effusion and a heterogeneous mass (A, arrow; B, asterisk) adherent to the right atrium from 4-chamber (A) and parasternal short axis (B) in the subcostal view
IVC - inferior vena cava, PE - pericardial effusion, RA - right atrium, RV - right ventricle

Figure 2. Transesophageal echocardiography shows the mass (black and white asterisk) with a greater size, attached to the lateral wall of the right atrium extending along both superior and inferior vena cava wall in the short axis (A) and modified bicaval view (B)
Ao - aorta, LA - left atrium, RA - right atrium

Answer: p. 533