Tricuspid Valve Mass: Think beyond Vegetation

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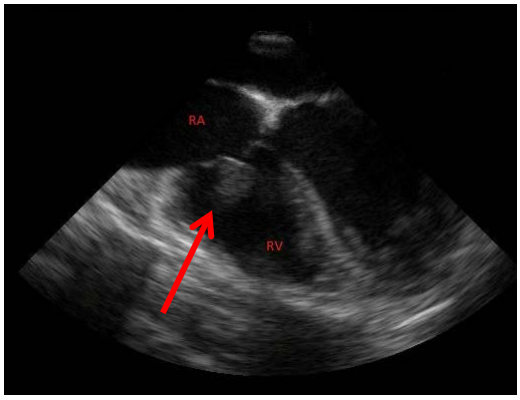

Figure 1. Transesophageal echocardiogram shows the mass. RA: right atrium; RV: right ventricle.

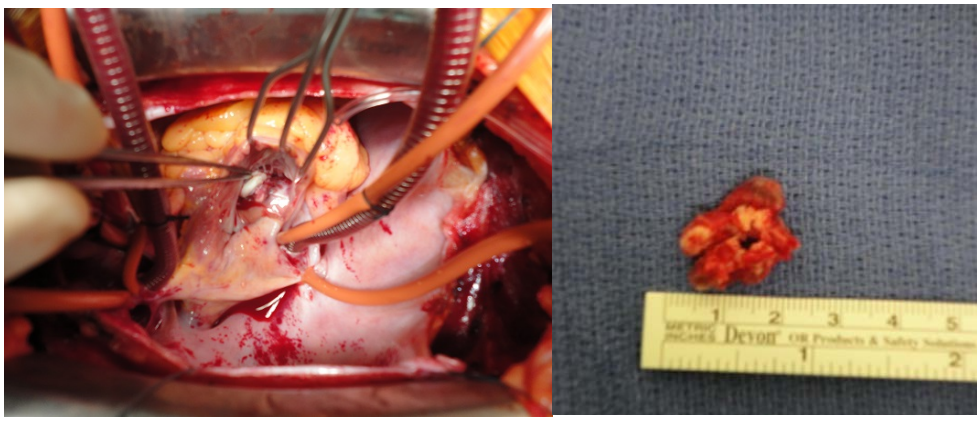

Figure 2. Operative finding of thrombus.

A 38-year-old female with a past medical history of autoimmune hemolytic anemia and two spontaneous abortions, presented to the hospital for sudden onset blindness, headache, and vomiting. The patient had been having joint pain for six months. A magnetic resonance imaging (MRI) of the brain showed abnormal signals within the posterior bilateral cerebral hemispheres suggestive of posterior reversible encephalopathy syndrome. An echocardiogram showed a tricuspid valve (TV) mass and a transesophageal echocardiogram revealed the mass

measuring 2.0 x 2.5 cm (see Figure 1). She was started on antibiotics empirically. Three sets of blood cultures were negative. Anti-Smith antibody, anti-double stranded DNA, and Lupus anti-coagulant antibodies were positive. She underwent cardiopulmonary bypass surgery to resect the mass and prevent pulmonary embolism. A fleshy irregular-shaped mass was attached to the septal leaflet (see Figure 2). Histopathological examination of the mass revealed an organized thrombus without any evidence of malignancy (Figure 3). The patient was diagnosed with secondary antiphospholipid syndrome (APS) due to systemic lupus erythematosus. Her post-operative course was uneventful. She was started on warfarin, steroids, and intravenous cyclophosphamide.

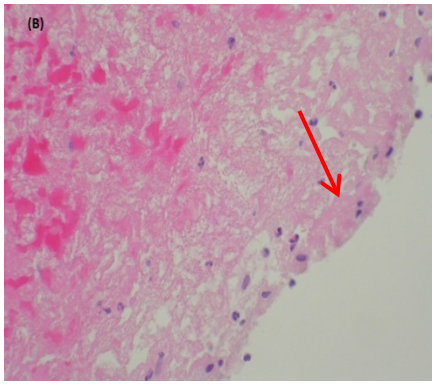

Figure 3. Fibrin material with scant inflammatory cells indicative of thrombus.

Discussion

Antiphospholipid syndrome (APS) is characterized by venous or arterial thromboses, morbidity during pregnancy, and/or antiphospholipid antibody (APL)-related clinical manifestations, such as livedo reticularis, thrombocytopenia, cardiac valve disease, or APL-nephropathy.[1] Intracardiac thrombi have been reported with APS, but involvement of the tricuspid valve is rare.[2] There are three basic types of tricuspid valve masses: tumor, thrombus, and vegetation.[3] Vegetation is the most common. Isolated thrombi of the tricuspid valve may mimic vegetations or tumors and lead to fatal pulmonary embolism.[4] APL antibodies activate endothelial cells to create a hypercoagulable state.[5]

In patients with APS, careful use of anticoagulant therapy is necessary to prevent pulmonary embolization. There is a high risk of recurrence after discontinuation of oral anticoagulant therapy.[6]

References

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Keywords: antiphospholipid syndrome, antiphospholipid antibodies, thromboembolism, tricuspid valve