The term “antiphospholipid syndrome” (APS) was first coined to denote the clinical association between antiphospholipid antibodies (aPL) and a syndrome of hypercoagulability. Its classical clinical picture is characterized by venous and/or arterial thromboses, fetal losses and thrombocytopenia, in the presence of antiphospholipid antibodies (aPL). We present the case of a young male patient who suffered a transient ischemic cerebrovascular attack and whose cardiac investigation revealed a cardiac source of embolus, namely non-bacterial vegetations of the mitral valve. Laboratory testing confirmed the diagnosis of primary APS.

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Nonbacterial Vegetations in a Young Patient with Primary Antiphospholipid Syndrome

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The term “antiphospholipid syndrome” (APS) was first coined to denote the clinical association between antiphospholipid antibodies (aPL) and a syndrome of hypercoagulability. Its classical clinical picture is characterized by venous and/or arterial thromboses, fetal losses and thrombocytopenia, in the presence of antiphospholipid antibodies (aPL). We present the case of a young male patient who suffered a transient ischemic cerebrovascular attack and whose cardiac investigation revealed a cardiac source of embolus, namely non-bacterial vegetations of the mitral valve. Laboratory testing confirmed the diagnosis of primary APS.

Key words: Arterial thrombosis, nonbacterial vegetations, antiphospholipid antibodies.
ed thickened, but without significant pathology. Having in mind the fact that in young patients with stroke or TIA cardiac sources of emboli are common, we proceeded to a transesophageal echocardiogram (Figure 2). This revealed the presence of non-pedunculated apposing vegetations on the atrial surface of both the anterior and posterior leaflets of the mitral valve (Figure 3). Color flow Doppler demonstrated a central jet of a mild mitral regurgitation (1+/4). Since the patient was afebrile, in a very good overall condition and his blood cultures were persistently negative for microorganisms, we concluded that it was a case of nonbacterial thrombotic endocarditis. This was the most probable source of the patient’s TIA, even though cerebral artery thrombosis, a well known manifestation of APS could not be excluded.

A more detailed laboratory investigation showed very high titers of anticardiolipin- and β2-glycoprotein antibodies (anticardiolipin total IgG/M/A: 236 u/ml, β2-glycoprotein I total IgG/M/A: 140 u/ml, normal range for both 0-15 u/ml). Antinuclear antibodies and anti-ds DNA were negative, and there were no other clinical or laboratory findings to meet the criteria of systemic lupus erythematosus or other autoimmune diseases. Therefore, the diagnosis of primary APS was established.

Given the patient’s proteinuria and hematuria our hospital’s nephrologists performed a computed tomography guided renal biopsy. Its most important findings were the occlusive lumbar thrombi of interlobular arterioles, with only a minimal perivascular mononuclear cell infiltration, changes known as thrombotic microangiopathy. This histological picture reinforced the diagnosis of primary APS.

Our patient was treated with warfarin (INR 2.5-3.0). Until the present time he has remained free of any thromboembolic events.

Discussion

“Primary” APS occurs in patients without clinical evidence of another autoimmune disease, whereas “secondary” APS occurs in association with autoimmune or other diseases, mainly with systemic lupus erythematosus. A recent consensus statement provides simplified criteria for the diagnosis of APS. A patient with APS must meet at least one of two clinical criteria (vascular thrombosis or complications of pregnancy) and at least one of two laboratory criteria (anti-
cardiolipin antibodies present at moderate or high levels or lupus anticoagulant antibodies, demonstrated by prolongation of phospholipid-dependent coagulation tests). No limits are placed on the interval between the clinical event and the positive laboratory findings.

The histopathological features of APS reflect a combination of several major pathophysiological processes: ischemia secondary to upstream arterial thromboses or emboli, peripheral embolization from venous, arterial, or intracardiac sources, and thrombotic microangiopathy.

There are no major differences in the clinical consequences between patients with primary APS and those with secondary APS. Virtually any organ can be involved and the range of disorders observed within any organ system spans a diverse spectrum, depending on two key features: the nature and size of the vessels involved and the acuteness or chronicity of the thrombotic process.

Deep venous thrombosis is the most common manifestation of APS, occurring in 29 to 55 percent of patients with the syndrome during an average follow-up of less than six years. Up to half these patients have pulmonary emboli. Arterial thromboses are less common, with strokes and TIA accounting for almost 50 percent of arterial occlusions and coronary occlusions accounting for an additional 23 percent.

The frequency of cardiac valvular abnormalities appears to be quite high, with up to 63 percent of patients with APS revealing at least one valvular abnormality on echocardiography. Many of these abnormalities are of little clinical consequence, such as valve thickening; vegetations of the mitral or aortic valves are present in approximately 4 percent of patients with primary or secondary APS.

Other prominent manifestations of this syndrome include thrombocytopenia (in 40-50% of patients), hemolytic anemia (14-23%), and livedo reticularis (11-22%). Among patients who have APS with renal involvement, hypertension is almost invariably present.

A beneficial role for anticoagulation in decreasing the rate of recurrent thrombosis has been shown in retrospective studies. Therefore, the primary therapy of APS is anticoagulation, generally to a level similar to that used for patients with prosthetic valves. There are no long-term controlled studies of the effect of chronic anticoagulation and valve disease. The indications for valve surgery are the same as in other patients.

In conclusion, we describe the case of a young patient who had a transient cerebrovascular attack and whose transesophageal echocardiogram showed nonbacterial lesions of the mitral valve. The presence of anticardiolipin antibodies in high titers confirmed the diagnosis of primary APS. This syndrome is a rare, but real reason for sterile vegetations of the valves, which can be the source of embolic events.

References


