Letters to the Editor

Antiphospholipid antibodies associated with different presentations at a University Hospital

Sir,

Antiphospholipid antibody syndrome (APS) is characterized by antibodies directed against either phospholipid or plasma proteins bound to anionic phospholipids. Antiphospholipid antibody syndrome is considered to be present if one of the following clinical criteria and at least one of the following laboratory criteria are present.[1,2] Clinical criteria include one or more episodes of venous, arterial or small vessel thrombosis, recurrent abortions, and thrombocytopenia. Laboratory criteria include the presence of Immunoglobulin (Ig) G, IgM, or both, anticardiolipin antibody using an enzyme-linked immunosorbent assay (ELISA).[3] This disorder is referred to as the primary APS when it occurs alone; or it can also be found in association with systemic lupus erythematosus (SLE), some rheumatologicl diseases, certain infections and drugs. The purpose of this study was to assess the association of antiphospholipid antibodies (APA) with different clinical presentations.

King Abdul-Aziz University Hospital (KAUH) is a governmental teaching hospital providing health care to a multinational population of mixed socio-economic status. A total of 40 positive cardiolipin antibodies were collected in the immunology laboratory at KAUH over the 2 year period between January 2000 and December 2001. Cardiolipin antibodies, either IgG or IgM, were measured by Varelisa standardized ELISA for ß2 - glycoprotein 1 dependent anticardiolipin antibodies, lupus anticoagulant activity, or both. Clinical notes of patients with positive cardiolipin antibodies were reviewed retrospectively. Relevant data such as patients' age, sex, and nationality were included. Various clinical presentations such as SLE or lupus nephritis were included. The diagnosis of SLE was made according to The American Rheumatism Association.[2] Cases of venous and arterial thrombosis were accepted only if they were confirmed radiologically by Doppler ultrasound, venogram in cases of deep vein thrombosis (DVT) or by angiogram in cases of arterial thrombosis. Brain Computerized Tomogram (CT) or Magnetic Resonance Imaging (MRI) examinations were accepted as confirmatory evidence of infraction. Patients with known causes of recurrent abortion were excluded (bicornuate uterus, incompetent cervix, diabetes, toxoplasma). Statistical analysis was carried out using the Statistical Package for Social Science (SPSS 7.5). Group results were presented as median ± standard deviation (SD) or as a percentage. Chi-square was used appropriately. Results were considered as significant if the p value was less than 0.05.

A total of 40 patients had positive cardiolipin antibodies either IgG or IgM. Median age at presentation was 29.5 (±11.32 SD) years. Patients included in the study were 38 (95%) females and 2 (5%) males with F:M ratio of 19:1. Twenty-four (60%) was Saudi while 16 (40%) were non-Saudis. **Table 1** illustrates different clinical presentations of APS. Repeated abortion was the most common clinical presentations especially in Saudi females, followed by SLE with or without renal involvement. Lupus nephritis was seen in 12.5% of SLE patients in whom the diagnosis was confirmed by renal biopsy and 12.5% of patients had repeated DVT at different sites. Three patients with DVT had pulmonary embolism, which was fatal in one. One patient with cryoglobulemia with positive APA developed axillary and mesenteric artery thrombosis, which was diagnosed by angiogram. Another patient from the Asian subcontinent presented with vasculitic malar rash with positive APA, and was later proved to have leprosy on skin biopsy. Repeated abortion was the most common clinical presentation with APS in our group with p value of <0.004, which is statistically significant. However correlation between the types of antibody titre (IgG or IgM) and clinical features was not attempted, as the sample was too small for significant result.

Antiphospholipid antibody syndrome has been described in middle and young age groups mainly

Table 1 - Clinical presentations of APA.

Clinical presentations	n	(%)
Deep vein thrombosis	5	12.5
Repeated abortion	15	37.5
SLE	10	25
Lupus nephritis	5	12.5
CVA	3	7.5
Cryoglobulemia	1	2.5
Leprosy	1	2.5
Total	**40**	**100**

APA - antiphospholipid antibodies; n - number; SLE - systemic lupus erythematosus; CVA - cardiovascular accident

due to the prevalence of SLE in this age group.[1] This is in comparison to our study where 95% were female with average age of 30 years with 37.5% of them having SLE with or without lupus nephritis. Love and Santoro in their analysis of over 1000 patients with SLE found an average prevalence of 44% of anticardiolipin antibody, which is similar to our result (37.5%).[2] There is a strong association between the presence of APA and recurrent abortion especially in Saudi females as reported in the study of Malabarey et al[4] from Saudi Arabia. The high number of Saudi females in our study with recurrent abortion was mainly due to the policy of KAUH where non-Saudis have no access to antenatal clinics. In our study the definition of repeated abortion was considered when there was history of 3 or more consecutive fetal losses with other causes of abortion excluded such as congenital anomalies or uterine abnormalities. The reasons for recurrent abortion in patients with APA are due to placental vascular thrombosis.[5,6] Statistically significant association exists between APA and history of recurrent venous or arterial thrombotic complications, as shown in our study. Venous thrombosis occurred mainly in lower limbs and in one patient was associated with fatal pulmonary embolism. Arterial thrombi occurred most often in the cerebral arteries, with strokes and transient ischemic attacks[5] as clinical presentation in 3 patients followed by, coronary arteries, cerebral venous sinus, splenic veins, renal artery, renal vein, adrenal vessels, cutaneous vessels and a vascular[7,8] necrosis of bone. One patient had axillary as well as mesenteric arterial infraction due to cryoglobulemia with APA. Antiphospholipid antibodies have been associated with many cutaneous abnormalities including livedo reticularis, livedoid vasculitis, cutaneous necrosis and infractions, thrombophlebitis, gangrene of digitles, skin ulcerations, lesions resembling vasculitis (nodules, macules) subungual splinter hemorrhages and Dego's disease. Antiphospholipid antibodies with vaculities was described in one patient who was diagnosed to have leprosy on skin biopsy.[2,3] In our study there was no association of APA with thombocytopenia although such association is widely quoted and has been demonstrated in various studies. In conclusion, this preliminary small study of 40 patients showed strong association of APS with recurrent abortion, SLE, venous and arterial thrombosis. However no association with thrombocytopenia has been reported in our study, probably due to the small number of patients.

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