Systemic Lupus Erythematosus and Antiphospholipid Syndrome - The Double Trouble

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Systemic lupus erythematosus is a chronic autoimmune multisystem disorder more commonly seen in females of the reproductive age group, diagnosed by ACR criteria. Antiphospholipid syndrome (APS) is an acquired autoimmune thrombophilia, characterized by vascular thrombosis, recurrent pregnancy losses and thrombocytopenia; supported by lab evidence for circulating antibodies against phospholipids or phospholipid binding protein co-factors in blood. APS can be primary or secondary. The revised Sapporo Classification criteria are used for the diagnosis of APS. The term APLA (antiphospholipid antibody) is not synonymous with the antiphospholipid syndrome (APS). There are patients who may harbour these antibodies but never develop the clinical symptoms of APS. There is a well-known link between SLE and APS; 40% of SLE patients have aPL, and, in turn, some, but only a minority of patients with APS, eventually will develop features of SLE.1

In a Spanish Study of 1000 patients of APS reported by Cervera et al, 36.2% had APS in association with SLE.2 Earlier studies from India have reported young stroke (by Makhija et al), recurrent pregnancy loss (Vora et al and Ghosh et al), cortical sinus thrombosis, deep vein thrombosis and myocardial infarction (Chandrashekara et al) as the common clinical presentations of APS. In a study by Singh NK et al published in JAPI 2013, prevalence of APS in SLE was 25.38%; foetal loss contributing to 26.5% and deep vein thrombosis 16.32%.3

In SLE patients, nephritis is a common clinical manifestation and hence the patients are usually divided into subgroups as lupus nephritis and non-nephritis. The pathogenesis of lupus nephritis includes the deposition of antigen antibody complexes in the glomeruli and glomerular thrombosis. Glomerular thrombosis is more common in patients of SLE with APS.4 However, there are conflicting reports in the published literature. In a study by Iaoniss Parodis et al,5 the authors have found no association between the association of either aPL positivity or levels with the occurrence of lupus nephritis. In patients with LN, IgG aPL may contribute to a short-term impairment of the renal function, but no effect on the long-term renal outcome was observed in this study. Furthermore, reductions of IgG and IgM aPL levels were noted in LN patients who responded to induction treatment, but not in non-responders, indicating that aPL levels are affected by immunosuppressive drugs in a response-dependent manner.5 The authors have recommended further investigation of aPL in LN, in order to determine their expression and functional role on a tissue level.5

In a study reported by Gao R et al,6 31 renal biopsy specimen were retrospectively evaluated and investigated for the β2 GPI expression. It was detected in 38.1% of patients of SLE with aPL associated nephropathy. Coexistence of aPL with intrarenal vascular lesions such as thrombotic microangiopathy, fibrous intimal hyperplasia and focal cortical atrophy constitute a condition called aPL associated nephropathy.7

Just as our country has geographical differences, there are variations in the clinical manifestations of the same disease from the different geographic regions of the country. This is so true for a multisystem disease like SLE. Hence, in this issue of JAPI, Doley et al have tried to compare the Indian scenario of SLE with APS patients from Eastern and Western India. It is intriguing to read that there are similarities in the clinical features like rash, arthritis and renal involvement but gross differences in the manifestations like photosensitivity, autoimmune hemolytic anaemia and serositis. There is female preponderance of the disease at both the centres with most of the patients in the third decade of life. The authors are complimented for carrying out such a comparative study to...
correlate the presence of APLA in SLE patients.

The drawbacks of this study are the patient population selected from Eastern India is from 2013-14 and that from Western India is 2008 to 2010. The authors have mentioned that IgG and IgM β2 GPI have been done by ELISA in methodology, but it has not been mentioned in the results or discussion. Also, lupus anticoagulant has not been checked in these patients. In discussion, the authors have mentioned a higher incidence of systemic vascular thrombosis, but there is no mention about what were the thrombotic events and its description would have been interesting to read whether there were more arterial or venous events. Also the number of patients having systemic vascular thrombosis is only 5. There is no mention about the pregnancy losses or bad obstetric history in the study population which is quiet surprising. Pregnancy loss which is very common in SLE with APS has not been discussed in this study.

Every woman has a desire to become a mother and is her birthright. But these females who are suffering from SLE with APS may not always be lucky enough to fulfil the desire of becoming a mother. In the natural course of the disease, poor pregnancy outcome and recurrent pregnancy losses are known to occur. However, with the advances in the management of pregnant patients suffering from SLE with APS, there is an improvement in the pregnancy outcome as compared to the outcome before 2 decades. Planning of pregnancy when the lupus is fairly controlled results in a favourable outcome of the pregnancy. Primary prophylaxis with aspirin and hydroxychloroquine in SLE patients gives beneficial effects in controlling the disease. In patients with history of prior thrombosis or fetal loss, heparin is indicated throughout pregnancy and in the post partum period. Thus, the earlier concept of avoiding pregnancy in these patients is no longer advocated. The presence of all 3 antibodies namely anticardiolipin antibody, anti β2 glycoprotein I antibodies and lupus anticoagulant increases the risk of bad pregnancy outcome. However, a recent study published by Lockshin et al, it is reported that LAC positivity is the only predictor of adverse pregnancy outcome and not affected by presence or absence of anticardiolipin antibody and anti β2 glycoprotein I antibodies. It is controversial whether specific serological findings (i.e presence of autoantibodies) or clinical association with SLE and other connective tissue disorders will predict a bad pregnancy outcome.

More multicentric prospective observational studies should be done from India to have a strong evidence in understanding the interesting association and relationship in these two Double Trouble disorders.

References